Manufacturers Record



WIDENING SOUTHERN MARKETS

The South has made greater progress out of the depression than other sections. Every field of endeavor, agriculture, manufacturing, mining, general trade, power and transportation reported increases in 1933 compared with 1932. The major items making up this inventory of the productive capacity and buying power of the South are covered in the 1934 Blue Book of Southern Progress.

In agriculture, the income was nearly double that of 1932. Farmers have lightened the burden of debt and become buyers of manufactured goods on a greater scale than for several years. Increased demand during the latter part of 1933 not only widened the market in the South for staple commodities but for durable goods. Automobile buying greatly increased in both the used and new car field with the result the South showed a gain in automobile registration as contrasted with a decline reported by the rest of the country.

As general business grew in volume there was a decided pick-up in building and construction with the second half of the year showing substantial gains in monthly awards over the first half. While small enterprises featured industrial expansion in the South during 1933, there was sufficient construction activity undertaken by major industrial concerns to indicate continued faith in the section's future growth.

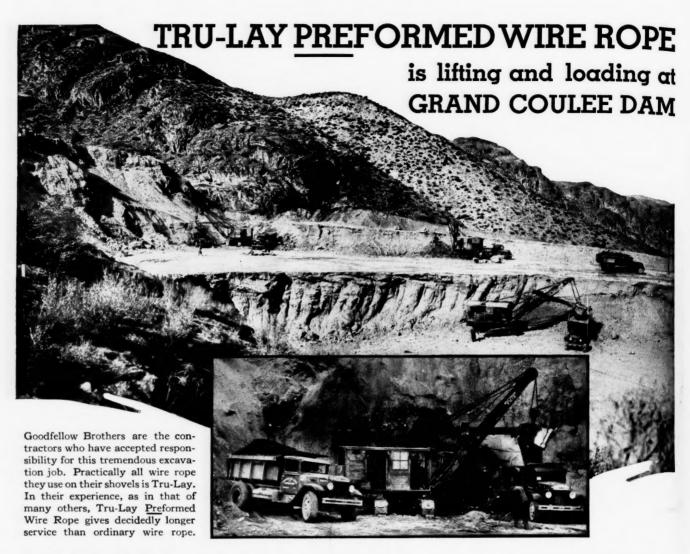
More than \$76,000,000 was invested in new industrial plants in the South last year and the total value of awards for industrial and engineering projects was in excess of \$153,000,000.

Manufacturing in the South was greatly stimulated with the cotton goods industry returning to the point where profits instead of losses were recorded. Last year the South with 62 per cent of the country's spindle capacity reported 76 per cent of the country's spindle-hour operation and Southern mills used 84 per cent of the cotton consumed in all American mills.

With the South producing 40 per cent of the country's mineral values in 1932, its mineral output during 1933 greatly increased. It increased its coal output to 155,000,000 tons, more than 40 per cent of the country's total. It produced 622,000,000 barrels of petroleum, or about 69 per cent of the country's total output and is producing 68 per cent of the country's natural gas and consuming 58 per cent. Its coke production in 1933 was 4,167,000 tons, its iron ore output was 2,159,000 tons and 2,197,000 tons of pig iron were produced. All of these primary products showed a gain in volume and value over 1932 as well as the output of bauxite, lime, sulphur and many other minerals for which 1933 figures are available.

Production of electricity by public utility power plants in the South in 1933 amounted to 19,082,830,000 kilowatt-hours, or a gain of 775,095,000 kilowatt-hours over 1932.

These and many other basic facts bearing on the progress made by the South in the past year illustrate the extent of the widening Southern market for the products of practically every type of industry in the United States. Complete statistical details will be found in the 1934 edition of the Blue Book of Southern Progress now in the final stages of preparation, and which will be available for distribution in the next two weeks.



1,200,000 cubic yards of excavation and Goodfellow Brothers use Tru-Lay

The reason Tru-Lay <u>Preformed</u> Wire Rope will play such an important part in this great undertaking is the real economy which comes from using a wire rope which has no internal stress or strain.

<u>Preforming</u> removes the tendency to high strand or low strand, kinking, bird-caging and other faults. Tru-Lay <u>Preformed</u> Rope is easier to splice. It handles better and requires no seizing. All of these things mean money to the contractor.

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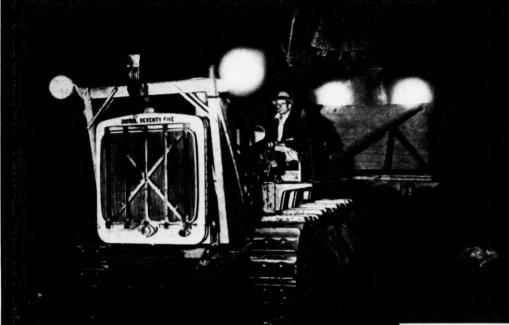
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UNRETOUCHED PHOTO OF TRU-LAY PREFORMED WIRE ROPE





ABOVE

At 11.500 feet altitude, a "Caterpillar" Diesel Fifty Tractor hauls supplies for a Colorado water diversion tunnel job. clearing its own way through snow. Fuel cost is only \$1.80 per 8-hour shift.

LEFT

Night and day, this "Caterpillar" Diesel Seventy-Five Tractor hauls 40-ton loads of rock and gravellow cost material transportation for the construction of the San Francisco-Oakland Bridge.

BELOW

Fuel costs for road work in Upsher County, Texas, were cut from \$3.50 to 40 cents per day when this "Caterpillar" Diesel Thirty-Five Tractor went to work.

"MY 'CATERPILLAR' DIESEL EARNS \$23.86 EXTRA PER DAY"

at

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TRU-

• • says a Nebraska contractor who is doing \$16.66 more work per day at \$7.20 less fuel cost than with his former gasoline tractor.

Fuel economy is the feature every owner lists first among the "Caterpillar" Diesel's advantages—the economy of lower price fuel plus lower fuel consumption. Many users find, too, that the "Caterpillar" Diesel with its steady, lugging power does more work per day than their former gasoline tractors. And all owners praise this tractor's dependability, easy and sure starting, simple operation and maintenance. Today, there are more than 2500 users of "Caterpillar" Diesels. There are three tractor sizes available, and three sizes of stationary power units. Caterpillar Tractor Co., Peoria, Illinois, U. S. A.



' AMERICA GOES DIESEL

JUNE NINETEEN THIRTY-FOUR

WHERE THE GOING IS TOUGH YOU NEED THE Extra Traction and STAMINA

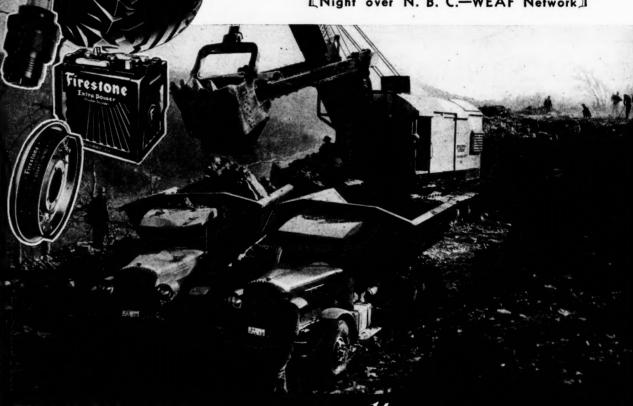


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JUNE 1934

Volume CIII No. 6

MANUFACTURERS RECORD

Devoted to the Upbuilding of the Nation Through the Development of the South and Southwest as the Nation's Greatest Material Asset

Published Monthly

by the

MANUFACTURERS RECORD PUBLISHING CO.

Frank Gould, President

Main Office: Manufacturers Record Building, Commerce and Water Streets, Baltimore, Md.

Branch Offices:
New York—11 W. 42nd St.
Chicago—10 S. LaSalle St., Room 608

Subscription Rate: \$2.00 a year (in advance). Single copies, 25c; back numbers, one to six months, 50c each; over six months, \$1.00. Combination rate for Manufacturers Record and Daily Construction Bulletin, \$10.50 a year.

Subscribers are asked to notify us of change in address to avoid delay in service.

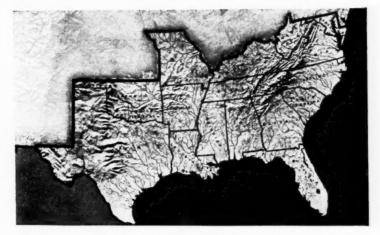
PUBLISHERS DAILY CONSTRUCTION BULLETIN AND BLUE BOOK OF SOUTHERN PROGRESS



ORD FOR

Member A.B.C.

JUNE NINETEEN THIRTY-FOUR



The South has 31.8 Per Cent of the Land Area and 33.6 Per Cent of the Population of the United States

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Aqueduct more tunnel headings are being driven with I-R Drills exclusively than with all competitive makes combined.

The on the

Tunnel	Miles		Number of Headings Equipped With		
Length		Conductor	I-R Drills	Com- petitive	Mixed
Valverde	7.2	Dravo Contracting Company	6	0	0
Bernasconia	1.1	Hamilton-Gleason Company	6	1	0
San Jacinto	12.7	Wenzel & Henoch Construction Co.	1	2	0
San Jacinto		(Potrero Shaft)	1	0	0
Whitewater	1.9	West Construction Company	1	9 0 0 .	0
Coachella	26.0	Metropolitan Water Dist. (Force Account)	5	7	0
Mecca Pass	1.1	Morrison-Knudsen Company	0	1	0
Cottonwood	3.8	J. F. Shea Co.	2	0	0
Hayfield No. 2	1.	Shofner & Gordon	1		0
Hayfield No. 1	1.8	Hunkin-Conkey Construction Co.	0	0 2 0 2	0
W. West Eagle	2.	L. E. Dixon & Bent Bros.	1	0	0
E. West Eagle	3.	Broderick & Gordon	0	2	0
East Eagle	1.7	Broderick & Gordon	0	1	0
Coxcomb	3.2	Winston Brothers	0	1	0
W. Iron Mt.	3.1	Utah Construction Company	0	0	1
E. Iron Mt. Copper Basin	4.5	Winston Brothers Company	0	2	0
Whipple Mt.	9.5	Walsh Construction Company	5	0	0
		TOTALS	23	19	1

April 15, 1934



S-70 DRILL

The drill that made the records shown on the opposite page.

hebredominating choice the Colorado River Aqueduct

Metropolitan Water District of Southern California

The table on the opposite page shows that of 43 Headings now being operated, Twenty-three (23) are equipped exclusively with Ingersoll-Rand Drills, Nineteen (19) with all makes of competitive drills, and One (1) Heading has mixed equipment.

The table below shows one of the reasons for I-R predominance.

Drill tests under actual tunnel conditions at Berdo Camp. Metropolitan Water District, Oct. 26, 1933

Drills operated by manufacturers' demonstrators. Time and measurements taken by representative of camp superintendent.

	COM	PETITIVE DRI	LL		I-R S-7	O AUTO FE	ED
	Start	Finish	Total Time		Start	Finish	Total Time
No. 1	10:34	10:58	24 Minutes	No. 1	10:34	10:52	18 Minutes
2	10:59	11:16	17 "	2	10:53	11:08	15 "
3	11:18	11:37	19 "	3	11:09	11:19	10 "
4	11:38	11:50	12 "	4	11:20	11:30	10 "
5	11:55	12:17	23 "	5	11:31	11:59	28 "
6	12:19	12:38	19 "	6	12:01	12:16	15 "
7	12:39	12:55	16 "	7	12:18	12:30	12 "
8	12:56	1:12	16 "	8	12:32	12:45	13 "
9	1:13	1:35	22 "	9	12:46	1:05	19 "

Overall Time 3 Hr. 1 min.

Drilled 86'—3"=1035"

f Headings ed With

Mixed

omtitive

2007

1002021102

oril 15, 1934

Average inches drilled per minute 5.711

Average time per hole 18.6 min

Overall Time 2 Hr. 31 min.

Drilled 88'-1" = 1057".

Average inches drilled per minute 7.

Average time per hole 15.5 min.

Ingersoll-Rand S-70 drilled 22 inches more hole in 30 minutes less time.

Ingersoll-Rand Company, 11 Broadway, New York City

Ingersoll-Rand

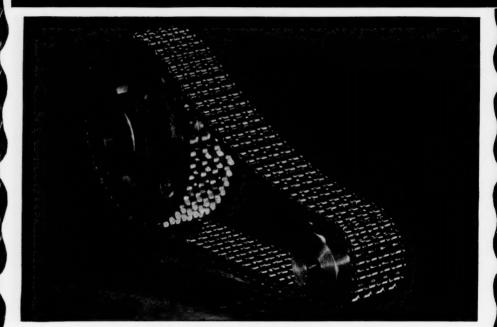
JUNE NINETEEN THIRTY-FOUR

7



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When the ring oiled bearings of six pumps operated continuously at 220 degrees F. in this plant,* the management decided that cleaning and maintenance was costing too much money.

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in operating temperature. Thereafter it was no longer necessary to tear down the units at frequent intervals for cleaning.

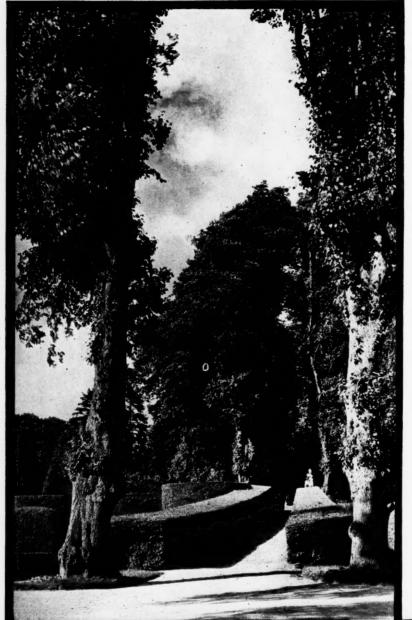
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Company	
Address	

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Glance at a job ... and you can tell immediately whether glass specifications have been met. The Pennvernon label gives the story. A red label ... "A" quality glass. A purple label ... "B" quality etc.



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e to the view superiority, ry glass. It ble strength, $1 \frac{7}{32}$ ", at the Plate Glass cities, and iobbers and . Write for Glass Comsburgh, Pa.



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ZINC CHLORIDE treated wood is rot-proof, termite-resistant and fire-retarding. Its long life, economy and other advantages suggest its use wherever clean enduring structurals or other timbers are desired.

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JUNE NINETEEN THIRTY-FOUR

The 1934 BLUE BOOK OF SOUTHERN PROGRESS

copies available after June 15th

In 1933 the South made greater progress than any other section. A doubled income from agriculture has greatly reduced farmers' debts and brought increased demand for staple commodities and durable goods.

cro

The vast store of undeveloped wealth of the South only awaits the hand of capital to begin anew another great forward movement in Southern industry.

ON c

The South in the past twenty years has demonstrated through the development of its primary resources that it can supply

the raw materials in abundance for practically every type of industry.

co

"The development of the South means the enrichment of the nation". Its labor, which is 94% American stock, its climate favorable to outdoor work the year round, and its unlimited resources are recognized as fitting the Southern states for the lead in the next great industrial advance.

QUESTIONS

What section of the country has made the greatest progress out of the depression?

In what fields of the South's endeavor are increases of 1933 over 1932 shown?

How does the South's agricultural income of 1933 compare with 1932?

Did automobile buying increase or decrease in the South 1933?

How did this compare with the rest of the country?

What was the investment in new industrial plants in the South in 1933?

What was the total value of the South's industrial and engineering awards in 1933?

Did the cotton goods industry show a gain or loss in the South in 1933?

What per cent of increases did the mineral output of the South show in 1933?

Was there a gain in production of electricity by public utility power plants in the South in 1933? If so, how much?

Answers to these questions will be found in the June Cover editorial of the MANUFACTURERS RECORD and in greater detail in the 1934 BLUE BOOK. The BLUE BOOK OF SOUTHERN PROGRESS is an exceptionally well adapted and valuable work for complimentary distribution in quantities by organizations and industries of the South to send to their customers in the North and West, and to those whom they would interest in Southern industry for investment or as a location for a factory or branch plant,

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As the press run is limited, order copies immediately, whether for single copies or quantities.

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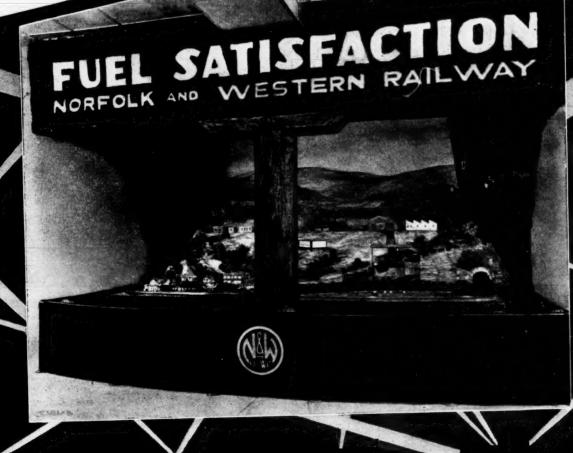
The widest distribution of this important work is desirable to acquaint investors and industrialists everywhere with the unequalled resources and opportunities of the South.

Published by

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BETH-CU-LOY SHEETS offer Rust-Resistance at Low Cost

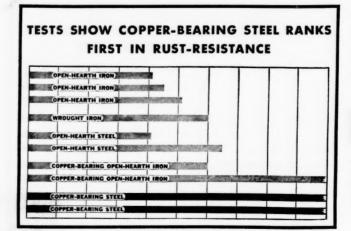
SUBSTANTIAL savings result from the use of low-cost, rust-resistant sheets of Beth-Cu-Loy, both in construction work and in the hundred-and-one uses to which sheets are put around an industrial plant. For Beth-Cu-Loy Sheets are made of copper-bearing steel, the material which the atmospheric-exposure tests carried out by the American Society for Testing Materials proved to rank first among the whole range of commercial steels and irons in ability to withstand rust.

In spite of their superior durability, Beth-Cu-Loy Sheets are not expensive. While they outlast ordinary steel under rust exposure by from 2 to $2\frac{1}{2}$ times, their cost is only slightly greater.

Save replacement costs and trouble by using sheets that you can depend on to resist rust, and give years of added service. In all applications where exposure to rust is involved use sheets of long-lasting Beth-Cu-Loy.



Beth-Cu-Loy Sheets were used throughout the duct work in the modern ventilating system of the new General Hospital of the Baltimore City Hospital. Heating and Ventilating Contractor, H. E. Crook Co., Inc.; General Contractor, J. Henry Miller, Inc.; Architects, Palmer and Lamdin.



This chart summarizes the results of the A.S.T.M. tests at Brunot Island, near Pittsburgh, Pa. These results, like those obtained at other locations, show that under exposure to atmospheric corrosion copper-bearing steel is superior to other commercial grades of steel and iron.



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• Manufacturers Record •

40 PER CENT OF NATION'S INCOME FOR TAXES

COMBINED indebtedness of the Federal Government and individual States is approaching the \$47,000,000,000 mark. State and local government debts are in excess of \$17,000,000,000 and the Federal debt, it is estimated, will reach \$30,000,000,000 in 1935. It is true that some of the Federal obligations are for capital supplied to various Governmental lending agencies with a reasonable expectation that part at least will be redeemed. On the other hand, some of the Government loans are to be repaid through special levies, such as the processing tax in reality a sales tax on essential commodities.

Federal, State and local governments disbursed in 1932 in the form of salaries, wages and interest \$6,800,000,000, or about \$900,000,000 more than the total income of \$5,900,000,000 produced by all the manufacturing industries of the country, says the National Industrial Conference Board. These government expeditures in 1932 were \$340,000,000 greater than in 1929, while income produced by manufacturing was \$13,500,000,000 less than in 1929. Therefore, the mounting public debt and consequent increased carrying charges and increased expenditures, especially by the Federal Government, necessitates the levying of additional tax burdens on the people. It is of vital concern, also, that in addition to the Federal Government, there are 48 States, 3,074 counties, 16,598 municipalities and thousands of special districts that are levying taxes to meet the cost of government.

These government debts must be paid by all the people. They represent a first mortgage on the earnings and savings of everyone. To think that they can be paid off by property owners and the more wealthy population group is an illusion of the demagogue and the radical. Every wage earner, every renter, every person who buys anything has to pay his share of government debt.

As Senator Josiah W. Bailey (Democrat) of North Carolina said recently:

"I wish to heaven that we could once realize that every tax laid is a burden upon industry, upon agriculture and upon commerce. I would that we could get out of our minds that we can lay a tax on a big bank, or a big corporation, or a rich man, and run the government. The taxes are passed on and always will be. If I understand the laws of the United States aright, they are intended to be passed on. They are described in the Constitution as imposts and excises, and imposts and excises are, in contemplation of law, always to be passed on."

As the public becomes more conscious that government spending means government collecting from all the people, there is a rising tide of demand for greater economy in government affairs. There is a limit to the capacity of the people to pay. There is a limit to the earning capacity and resources of the United States. They can be mortgaged beyond hope of liquidation.

During the emergency of depression the use of public money to feed the hungry and to give employment was essential but when this purpose has been perverted to capital investment in government enterprises that compete with existing private business it is worse than waste of public funds. It tends to destroy private enterprise and curtail private employment. Part of the program for public expenditures includes hundreds of millions of dollars of taxpayers' money for the building of government owned and operated tax-free hydro-electric projects.

There is no shortage of power capacity in the United States. There is a surplus of power. Senator Metcalf of Rhode Island has pointed out that hydroelectric projects of the Government will duplicate 53,000,000,000 kilowatt hours of electric energy now generated by fuel plants which use 40,000,000 tons of coal annually. It is estimated that this would throw 40,000 miners out of work in addition to railroad and other workers whose jobs, directly and indirectly, depend on the steam plants. On the one hand the Government is curtailing production in private industry, sanctioning the provisions of NRA codes that limit the building of new plants. On the other hand, it is creating additional capacity. To do this it increases the public debt, increases the tax burden, increases competition with private business, impairs investment values and in the affected industries removes a source of taxable income.

The opinion is shared by thoughtful men that the Government should proceed with caution along the road of assuming activities which have been heretofore handled by private institutions. Private enterprises must thrive or there will be no taxes with which to pay the expenses of government.

Congress and all Government officials must be made to realize the necessity for Government economy, points out David A. Weir of the National Association of Credit Men. We have been glibly talking so long in terms of billions of dollars that to many the expenditure of a few hundred million here and there by the Government seems trivial.

He warns against the "spending complex" which has gained control in the talk of both national and local governments as they turn to new methods of raising money and further away from plans for saving money through the inculcation of business methods. Federal, State and local government employes have increased from 2,618,000 in 1922 to 3,150,000, a gain of more than 20 per cent against a population growth of about 14 per cent. Government payrolls have been expended to almost war-time proportions. Government agencies have been added by the dozen. Millions of people are now directly or indirectly dipping in the public till as though it could never be emptied.

To assume that unlimited distribution of funds through government expenditures will stimulate purchasing sufficiently to offset the cost is equally as fallacious as to assume that it makes no difference for what purpose money is spent so long as it is kept in circulation, asserts Mr. Weir. The idea that people can be taxed out of debt, a debt that is largely the result of excessive government expenditures, will not work. It has been refuted many times in the course of history. As a by-product of the dangers of careless government expenditures, is the danger of perpetuating unsound principles of government financing and operation.

Unbusinesslike methods of conducting local governmental units have been notorious. Such laxness is not mainly due to dishonest or inefficient officials. A large part of it is caused by antequated systems of local government with over-lapping and duplicating agencies and jobs, and too many tax-levying bodies all demanding more revenue.

There is a limit beyond which it is destructive to enterprise to impose additional taxes. The increasing burden of public debt, excessive government expenditures, wasteful and inefficient methods of government have reached a point where they are not only retarding recovery but now constitute one of the greatest menaces to ultimate recovery and prosperity. Excessive taxes means confiscation of earnings and property. In 1933 it required about one-third of the nation's income to meet tax payments. It is estimated that about 40 per cent of the nation's total income is now taken and distributed in governmental channels, including Federal, State and local governmental agencies. No nation of the past has ever survived such a tax burden.

PROMOTING SOUTHERN INTERESTS

MEETINGS are being held in several of the Southeastern states—Virginia, North Carolina, South Carolina, Georgia, Alabama and Florida—to form an organization "to promote industrial, commercial and other interests." It is stated that it will follow to a considerable extent the lines of work of the New England Council.

As outlined, the plan provides for state committees, the members of which will make up a central organization. The purpose is to promote industry in the Southeast and increase tourist travel. Also, to attract permanent settlers and inform the people of the country of the resources and possibilities of the Southeastern section.

W. S. Lee, Jr., of Charlotte, Chairman of the organization committee, writes the Manufacturers Record that "we propose to organize the leading business men to cooperate in promoting the interests of the Southeast in every possible way. We will departmentalize the organization to include tourist, industry, transportation, government, agriculture, finance, advertising, education and other activities. We are first attempting to coordinate all existing groups of a promotional nature under one head, so that we will have a united voice in the Southeast. By this cooperative effort we will be more effective in telling the world about the fine things that exist in the South."

Howard E. Coffin, of Sea Island, Ga., who has taken an active part in promoting the enterprise, has invited those interested to attend a six-state conference as his guest at the Cloister Hotel, Sea Island, Ga., June 29 and 30, when definite plans will be approved and a permanent organization formed.

While recognizing the importance of every worthy movement to bring to public attention the unmatched resources of the South and acquaint not only the citizens of the rest of the country, but those located in the area concerned with the opportunities for development lying at their doors, it is essential, if the proposed organization is to succeed, to recognize some of the errors of the past, which caused other movements to fail. For such a work, which is more than worthwhile, to have the fullest success, it will be apparent that it is essential for those engaged in it to recognize and insist that it shall be for the area as a whole included in the plan and that individual or local selfishness will not be permitted to creep in.

There is no doubt of the fact that with broadgauged management and leadership and by reason of the advantages of the six states contemplated in this enterprise, with their vast resources of mine, of forest, climate and American labor, which is 94 per cent American stock, there can be presented a compelling inducement to business enterprises and tourists.

The work of the New England Council has been successful not only in setting before the country the advantages that New England possesses, but has accomplished a notable work in the unity of purpose it has brought about among all interests in the New England states.

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SOME of the measures adopted at Washington under the New Deal are detrimental to progress. The attitude toward union labor and wage rates has made it difficult for Southern plants, especially, to operate. Rates of pay have been dictated, which put aside established differentials without which some of these plants never would have been built. Professional labor leaders have been encouraged in a campaign that has led to unrest. The result is there is developing in the South a serious labor problem that will be hard to adjust-a condition from which it has been largely free in the past. Minimum wage rates have been arbitrarily raised in this section, although no corresponding increase in the base rate applying to similar industries appears in other parts of the country.

Strikes in nearly all of the States may be traced, certainly in part, to the fact that labor has been encouraged to believe it has not been treated fairly. Industry itself is partly to blame for another phase of the New Deal, which must be changed if the South is to resume full progress. Under certain codes there are provisions against the building of new plants and against increasing industrial capacity.

The South can supply the raw materials from forests and farms and mines for industrial expansion of new enterprises that will contribute to an almost unlimited extent to the wealth of the nation. The prohibition of such new plants, no matter what the excuse, is economically unsound. It penalizes initiative and stops progress. For some years the trend of industry has been toward the South. There are located here many of the largest plants of their kind in the United States and the world. It is the dominant textile manufacturing section of the country, producing over 60 per cent of the domestic cotton goods output. It has 70 per cent of the country's rayon manufacturing capacity. It produces half of the nation's lumber, most of the wooden furniture, most of the kraft paper, a large part of the shoes made in the United States, most of the tobacco manufactured, about half of the aluminum, and produces 40 per cent of the total mineral values of the country. And its development has only begun.

Is this industrial development to be stopped? Is the South to be denied the right to utilize its raw materials through private enterprise and to build plants and furnish employment for its people?

With an already established chemical industry, it has potentialities for becoming the center of chemical manufacturing in the United States.

From its cotton and its pines it can supply our cellulose needs. We spent abroad \$143,000,000 for pulp and paper last year. This money could be kept at home and furnish employment for American labor, but according to the paper code we have enough paper mill capacity now. No new cotton mills, no new iron and steel mills, no new ice plants can be built, as presumably we have enough now.

The Manufacturers Record for 52 years has advocated the fullest Southern development. Unceas-

ingly it has called attention to the unequalled resources of the South, and the great need for abundant capital to develop its resources, so that the wealth not only of the South but of the nation might be increased. It believes in the freest flow of capital and liberal inducements to industry to start, but the Manufacturers Record does not favor government entering the field of private enterprise. The introduction of government operation into private fields will lead to abuses and be detrimental to national welfare.

According to press dispatches a group of people has asked the Federal Government for \$20,000,000 to be used as capital for an aluminum plant to be established near Muscle Shoals. Undoubtedly with government capital, supplied by the taxpayers', there could be established a great variety of enterprise in all parts of the country competing with private industry, and if power was furnished at extremely low figures by the government, it is conceivable that manufacturing costs could be cut to a point so low that private competition would be out of the question.

The idea has been advanced that the Government should furnish the capital for a Southern newsprint industry, and some no doubt would like to see the government operate such an industry to utilize the unlimited wealth of Southern pines. The development of this industry is one of the real opportunities presented in recent times. But if it is to be a government enterprise, competing with private concerns and thus perverting the functions of government, it would be far better to abandon the idea of the development.

There are still some who do not want the principles upon which this government was founded put aside. The Southern Newspaper Publishers' Association was careful to say "by private enterprise" in its resolution encouraging the idea of establishing a newsprint industry in the South.

Private investment for new ventures has been discouraged. The free flow of individual capital has been checked by the threat or actual passage of such measures as the Securities bill and the Stock Exchange bill. Banks complying with government orders requiring unusual liquidity, have denied loans for promoting new enterprises, so that there is an explanation for individuals turning to government for assistance in financing, but this does not justify the government entering more completely the field to set up its own government operated enterprises, which will still further embarrass industry at a time when of all times industry needs immediate and continued encouragement.

People are becoming keenly aware of some of the folly that has been tried as the destructive cost of it mounts. The welfare of the country rests upon industrial progress. Bureaucratic control of American activities is not and never has been in favor. Notwithstanding the professorial idealism that business profit must *not* be the measure of recovery, the business world and practical people generally recognize that the progress we have made in the past, in most things that have made life what it has been in this country, has come from business profits.

DANGERS CONFRONTING **AMERICA**

S. W. Utley

President and Manager The Detroit Steel Casting Company Detroit, Mich.

OW is business? What are its prospects for the future? Is this nation making steady progress out of the depression, and can we hope this will continue?

Such are the questions each one of us is constantly asking himself; such are the questions we are asking each other as often as we meet. If, as a former President once observed, "The business of America is business"; if, as appears to be the case, that which we call Industry must not only support itself, but take care of the unemployed, provide a market for the product of the farm, and through the processing tax likewise provide a market for the things the farmer doesn't produce—these become the most vital questions which can possibly be asked; for upon their answer depends in a large measure the future welfare of the entire nation.

There can be no question that the bottom of the world-wide depression was reached in the mid-summer of 1932; that all the Industrial nations except Canada (she started upward in February 1933), began a distinct upward trend in August or September of that year. Using 1928 as a base, and the League of Nations figures as a barometer, the production indices of the industrial nations, as of February 28, 1934, stood as follows:

Japan	About	137.0
Great Britain		102.0
Sweden		100.0
France		83.0
Germany		80.6
United States		73.0
Canada		70.3

We showed an improvement of 20.7 per cent over the figure at the depth of the depression, and 12.3 per cent over the figure at the end of October 1932, at which time the election took place. *According to these figures we have shown less progress since the end of October

1932 than the other industrial nations which gather and keep statistics.

This picture challenges the attention of every thoughtful man.

Why are we in the laggard position? It hasn't been usual for us to consider ourselves as the most backward of the industrial countries. With all our wealth with all our enterprise with all our natural resources, plus the uncounted billions of Federal money borrowed from the future, and poured out to stimulate purchasing power, why have all the other nations outstripped us in the race back to business prosperity? Why has the doubling of the National debt, in an attempt to promote business, been so futile? Why have the last eighteen months, with all their emergency legislation, and staggering increase in debt, produced but 4 per cent more upward progress than did the three months just preceding the last

Amid all the confusing contradictions of the Federal legislation for the past year certain principals seem to stand out clear and distinct. There is a definite, consistent attempt to subject all business, agricultural, commercial, and industrial, to the constantly increasing control of the Federal Government; to curtail the authority of the individual over his own business, without in any way relieving him from the responsibility for results; to decrease private profit and redistribute wealth; to enormously increase both taxation and debt. There seems to be a definite attempt, through so-called investigations, which apparently are entirely one-sided, to foster the idea that all American businessmen are dishonest, corrupt, grasping, of low intelligence and ability, and in every way unfit either to manage their own business, or to be considered as worthy citizens. In addition to this, by repudiating the gold contract, cutting down the content of the dollar, and refusing to give any definite idea of its policy, the Administration seemingly has placed the citizens in the position of a mariner who has had no sight of the sun for many days, and, unable to fix his position on anything definitely, drifts helplessly over an unknown sea.

Looking at the situation calmly and dispassionately, from the standpoint of logic, rather than emotion, if the above statements fairly represent the effect of the legislation enacted at the behest of the present Administration, is there any

logical reason to expect a permanent revival in business, as long as these conditions exist?

If the actual effect of legislation enacted, as contrasted with superficial claims, is to take the control of business away from the owners of that business and place it in the hands of a Federal bureaucracy, which has no interest in its welfare, and decides every question primarily from the standpoint of getting votes, can any one expect that the owners are going to be diligent in promoting the business that is, in fact, being taken away from them? Do you care to invest your own dollars, in your own business or someone else's. when you don't know whether they will come back as dollars or as worthless paper? Does the cry that there is too much profit in business, and that this must be eliminated, make you yearn to invest what little you have left, and to burn the midnight oil striving to increase the wealth of the country through the greater success of your own business, when you realize that according to the Treasury Department's "Statistics of Income" the average annual income of corporate American business, for the nine years previous to 1932, showed a net return of but 3.78 per cent in the net worth of that business? Do you prefer, under such conditions, to take the hazards of business, or to get a higher yield in relatively safe government bonds? Doesn't there seem to be a good deal of justification for the charge that business hasn't recovered because the attempt of the Administration to discard the principles on which American business has been built up, and to substitute for them principles which the thoughtful man knows have failed whenever tried in the past. has resulted not in a stimulation of business, but rather as a drag on its natural rebound from the depression?

It would seem that the logical way to accomplish recovery is to stimulate the production of more wealth, in order that there may be more for each one to share, and that the way to do this is to give a wider scope to individual ability, and to hold out hopes of a larger return for individual initiative and business risk.

The present situation is an impossible

Lincoln's statement that a nation cannot exist, "half slave and half free." was no truer than the statement that Industry cannot exist partially under a

(Continued on page 50)

AT SEA WITHOUT A COMPASS

John Henry Kirby Houston, Texas

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F the thoughtful men of this Republic, whether in or out of office, would accept the truths of history they would know the causes which have brought the industries of the United States, including agriculture, into the present state of stagnation.

This has been a Government of Political parties ever since 1796, when the Federalist Party, organized by Alexander Hamilton, defeated the Jeffersonians and elected John Adams to the

Seeing the effectiveness of Party organization in National elections and recognizing the necessity for some such organization to combat the Federalists. Mr. Jefferson organized the Republican Party and in the presidential contest of 1800 defeated the Federalists.

The political party which Mr. Jefferson founded was successful in every presidential contest in the succeeding 24 years, having twice elected Mr. Jefferson to the presidency, twice elected Mr. Madison to the presidency and twice elected Mr. Monroe to the presidency.

In consequence of these successive defeats the Federalist Party disintegrated and the Whig Party arose to take its place.

In every presidential election for more than half a century, that is from 1800 to 1856, the party of Jefferson was successful in all but two. The Whig Party triumphed in the election of Gen. Harrison and again in the election of Zachariah Taylor.

In 1828 the Party of Jefferson became known as the Democratic Party. Its opponent, the Whig Party, after successive defeats, disintegrated and the present Republican Party was organized in 1856 to take its place. That Party in that year was defeated through the election of James Buchanan as President but in 1860 it triumphed because of a split in the Democratic Party.

From 1796 to 1928, a period of 132 years, we have been under Party Government

In each four-year period the members of the major political parties, always

tional Convention, formulated a platform declaring the principles by which they would be guided, and the policies which they would endeavor to maintain if entrusted with the administration of Government.

In 1928 the major parties held their Conventions, nominated their candidates and promulgated written platforms. In that contest the Republican Party triumphed electing Mr. Herbert Hoover to the presidency and Mr. Charles Curtis to the vice presidency.

Promptly upon his inauguration, and for the purpose of carrying out the pledges of the Republican Party made in its Kansas City platform in 1928, Mr. Hoover convened the Congress in extraordinary session. Both branches of the Congress were in the hands of the Republicans. There were certain Radical Senators elected as Republicans and affiliated with the Republicans who, instead of yielding their views to the majority of that Party, rebelled against the President and against their Party organization. The Senators in the Opposition Party coalesced with them and thus defeated responsible Party Government. By this act of coalition between the rebellious Republican Senators and the Opposition members of that body the people came to know that these rebellious Radical Senators, holding strange views and advocating un-American policies, were in control of the legislative authority in the United States in the sense that the measures to be passed would be those and only those which had the support of this radical Republican minority. When that fact became known public confidence was shell-shocked. America's prosperity was stopped at the noon hour and nothing has been done since then to restore public confidence in the wisdom and patriotism of the Federal Congress.

Legislation in the Hoover Administration departed from the authority lodged by the Constitution in the Congress of the United States, which authority had always been respected by both the Legislative and Executive Departments of the Government regardless of which or what political party was in control.

The dominance of these Radical Senators halted all public progress. In an effort to restore public confidence class legislation was resorted to. They passed the law creating the Farm Board and two and sometimes four, met in Na- appropriated millions for its use; they triotic fathers wrote into it.



John Henry Kirby Founder of the Kirby Lumber Co.

tampered with the tariff, introducing business uncertainty and consequent stagnation; they created the RFC, appropriating billions of dollars for its use. In the opinion of men throughout the Republic this deviation from the Constitution, this wholesale appropriation of the taxpayers' money to nongovernment and non-Federal purposes, tended to accentuate the distress which had followed the loss of National faith in the stability of our Government.

In March, 1933, a new Administration came into power, which immediately proceeded to further accentuate the deviation from the Constitution which the American electorate had always previously resented. The Constitution was scrapped and legislation resorted to that violated every principle underlying that great instrument, and violated many of the most important pledges to the people and to the States under the Bill of Rights. That wise arrangement in the Constitution which divided the powers of Government into three separate branches, Legislative, Executive and Judicial, making each independent of the other, was abandoned. A Government of Laws was suspended and a Government by Boards, Bureaus, Departments, Commissions and Administrations was substituted therefor.

We are now endeavoring to sail a ship at sea without a compass. We do not know where we are, to what port we are headed or whether we shall ever arrive at any port. The only compass we had, the Constitution of the United States, has been left behind. There will be no permanence and no orderly progress; no orderly production and distribution: no thrift and no prosperity until we restore that Constitution and make effective every provision which our pa-

ECONOMICS VS. THE NEW DEAL

By

Lewis H. Haney
Professor of Economics, New York University

THE New Deal was born of two parents: (1) political expediency, and (2) "Institutional Economics." The institutionalists emphasize the dependence of the individualyou and me-upon the "institution," meaning by the latter term, government, laws, and customs. Property and contract rights, and social arrangements which encourage or restrict individual initiative are "institutions." They believe in "social control" over individual actions through institutions, holding that government should and can initiate economic action, and direct economic life.

Institutionalists assume that they, or some ones of their number, know what is best for all of us (we being disguised as "society"), and that they are qualified to determine man's destiny, or at least that they know what that is. Thus the profoundest and most colossal egotism lies back of their schemes.

Not only do they think it possible to control destiny, merely by making institutions, but they know how to do it!

Disregards Economic Law

This is not economics. It is not science at all. It is policy, or art. The sure ear-mark of the so-called institutional economist is his disbelief in positive economic law. He admits no fixed limits in environment, cost, or "human nature." He considers economic forces and relations to be inherently unstable and changing, so that life is just one "emergency" after another. Therefore, he will not take any firm postulate or given set of conditions as the basis for economic laws. He will not grant that a condition of equilibrium can exist. He is full of ethical "norms"; but can see no general standard, nor any normal equilibrium.

Tell him that price-fixing has failed in the past—he replies, "Times are different." So experience does not count. We must experiment. He is always "on the way"—toward some ideal. And in his mind, the ideal end justifies any means. Thus he is utterly ruthless. Clauses and contracts are unhesitatingly repudiated.

As with all science, so in economics,

the essence is "law," or the establishment of necessary sequences—given certain conditions, certain results follow. But your institutionalist says: "I want certain results, and I myself will make the conditions to suit my purpose—one way or another!"

Drastic "Idealism"

Of course, this is extreme "idealism," of the most drastic type. Mind, says the New Dealer, can dominate matter. Man is independent of, and can make, his environment. (Read Roosevelt's Salt Lake City campaign speech.) So he is not governed by economic laws, but makes uneconomic laws by government. There is no law of supply and demand, he says, or but a feeble one; and "the Administration" can make demand by passing a law to "create purchasing power," or can control the supply of cotton, wheat, hogs, petroleum, and whiskey, by edicts and taxes.

As to the value, or price, which is supposed to be determined by supply and demand—don't worry, we will "fix" it. Price-fixing inevitably goes with such a philosophy.

And if the experiment does not "work," the idealist will finance the withholding of any excess supply (or "dump" it in China or Russia).

The fiat money system now existing illustrates the philosophy. The New Dealers fix a "mint price" on gold, in terms of paper dollars, and imagine that they determine the value of gold. But that does not affect the value of gold (the metal). An ounce of gold will buy no more potatoes when quoted at 35 paper dollars than when quoted at 20.67. Under this form of "nominalism," they merely fix the price of the money unit, or dollar, not the value of gold.

And thereby, they either maintain a government "buying price" out of line with realities, thus preventing all convertibility of their paper money into gold; or they increase the number of paper dollars until finally the dollar can be converted at the "fixed price," which is currency inflation.

We should note that Socialists are logically idealists, and Socialists always want to destroy the use of money as a standard of value. It is no accident that the New Dealers are loose thinkers in monetary matters. They want no standard but their ideals or wishes, and think that they can make values by merely doing things to the medium of exchange.

A standard money unit is closely

analogous to other units of measure. Would anyone say that by "devaluing" the bushel—reducing its size—one could increase the farmers' wheat production? No. That would merely make more bushels, not more wheat. Nor do we, by depreciating dollars, increase anyone's purchasing power or add to the nation's wealth.

The extreme idealist begins by assuming the existence of great differences among men, which difference allows him his position of dictatorship. He then, however, assumes that unequal men can be made equal, merely by adopting certain institutions which he as dictator can devise. The net result is the tyranny of treating equally those who are unequal.

Relation of Individual to Society

Closely tied in with idealism, and hence with the "Institutional Economics" of the New Deal, is an attitude toward the individual, toward society, and toward the relation between the two. The New Dealer, like the Socialist, thinks that the individual lives for society, not society for the individual. He sees the individual merely as a cog in the machine, or as a cell in the body.

This notion is exactly like the old legal fiction of the corporation as being an "entity," independent of its individual stockholders, and is just as unreal and vicious. It leads to the notion of the "corporate state" with its regimented Nazi or Fascist citizens.

It leads to utter ruthlessness. It leads to repudiation of contract obligations. It leads to convicting individuals (for example, aviation companies) without a hearing. It leads to sweeping laws which ordain that no one may bring suit against their provisions, that all individuals are to be bound not only by the terms written in the act, but by any other rules that may subsequently be made by the government, or any other conditions that may be prescribed by the President. Of course, taxes are levied for enforcing any social ideals which appeal to the Administration, without regard to the ideas of the taxpaying citizen. No one is more ruthless than your idealist!

"Planned Economy"

Idealism and disbelief in economic law lead to the so-called "planned economy." This means an economy ordained by the will of some political leader or group, and forced upon others by a system of licensing and regimentation. It means

(Continued on page 50)

INFLATION IN FRANCE— THE ASSIGNATS, 1790-1799 On Series is sue in the Na panied total of total of total of total of total of the Na panied total of total

By L. F. Loree

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MONETARY inflation is a progressive disease. Insidious and almost imperceptible in its inception, it gains impetus rapidly until it involves the whole economic structure in sweeping devastation.

Diocletian, a Roman administrator of real capacity, who reigned for twenty years from 284, A. D., attempted a currency reform but his efforts had no permanent results and he was soon caught in the meshes of "planned economy." He attempted, ineffectually as has so many times been tried, to fix by law the wages of all labor and the prices of all commodities; involved the Empire in a vast bureaucracy; decreed servitude for the masses by regimentation and prohibitions of migration, so laying actual foundation for the appalling poverty, ignorance, suffering, degradation and insecurity that affected Europe for quite a thousand years.

Lesson From the Past

Historical repetitions should teach us their lesson. From the abdication of Diocletian, in 304, to the execution of Louis XVI of France, in 1793, the aspect of Europe changed vastly and power passed from the shores of the Mediterranean and the Bosphorus to those of the English channel and the North Sea and to the Iberian peninsula. There had been a few centuries of genuine progress but, in 1789, when came the French Revolution, the treasury of France was bankrupt, masses of the population were in dire distress and governmental finance had been reduced to a series of fruit-The disasters of the less expedients. Mississippi Bubble and John Law's inflation two generations before had not been forgotten, the wholesome fear of flat money remained. A proposal was made to mortgage the confiscated lands taken from the Church, as security for a National currency of paper. Never was argument for printing-press money more plausible, never has security seemed so sufficient, never has inflexibil-

ity of control been so ardently proclaimed or so generally accepted. The property confiscated represented the pious accumulations of fifteen hundred years; its value was five times greater than the whole issue of notes (called assignats), against which it was specifically pledged. The notes were made to bear interest at three per cent and it was urged, and believed, that this would prevent overissue, endowing them with an accumulative value that must bring hoarded metallic money again into circulation and effect their withdrawal from the monetary supply as they became redandant. The first issue, 400,000,000 livres. was made in April, 1790. It produced the same effect that was seen here in 1933, when, by the Thomas amendment inflationary powers were vested in the President of the United States; that is to say, the belief that money would become cheap created desire to exchange money for commodities and there was a temporary rise in prices and a temporary increase in business activities. But in less than five months, this impulse became exhausted and there was a new demand for more cheap money.

The danger of uncontrolled inflation is prominent in the thoughts of a great many conservative people. Some are of the opinion that it is not far off. If started it will lead on and on until a situation results from which we can be extricated only by what will amount to a virtual reorganization of all our affairs. History shows that such ventures end in disaster.

The accompanying article by L. F. Loree, president, The Delaware and Hudson Railroad and chairman Executive Committee Kansas City Southern Railway, New York City, who is not only a foremost railroad executive but a keen student of finance and industry, will be found extremely interesting.

On September 29, 1790, an additional issue in twice the volume of the first was authorized by a small majority of the National Assembly, and was accompanied by a solemn declaration that the total of 1,200,000,000 livres thus provided should never be exceeded. It was also promised that as fast as the notes were received in the Treasury, in exchange for lands which would be sold, they would be burned and that thus a continuous and beneficent contraction would be certain. Unlike the first issue, the new notes bore no interest.

The Debacle of Inflation

The debacle had begun. Inflation was now in full swing, feeding upon itself; pledges were worthless and certain to be repudiated. Metallic money, even copper and silver tokens, at once disappeared from circulation. Notes paid into the Treasury for land were not destroved but were re-issued and, in November, 1790, barely two months after the pledge not to further increase additional notes of 100,000,000 were authorized. A fourth issue of 600,000,000 livres was provided on June 19, 1791, and another on December 17 of the same year, raising the total to 2,100,000,000, the fifth issue being accompanied by a new covenant of limitation. There were repeated new issues during the years from 1792 to 1795 and, on December 22, 1795, the purchasing power of the notes having fallen to almost nothing, it was grotesquely decreed that the whole amount ever to be issued should be limited to 40,000,000,000 livres and that when this aggregate had been reached the plates should be destroyed. Yet, after this, there were additional issues of 10.000.000.000 livres and, although accurate reckoning was lost, it is believed that the total approximated 45,000,000,000 livres. An end seemed to be made on February 18, 1796, when, in the presence of a vast crowd, all the machinery, plates and paper for printing assignats was publicly broken and burned at the Place Vendome. But, the Directory knew no remedy but to proceed from one inflation to another inflation. A forced loan to be exacted from the wealthier classes failed. A new sort of printing-press money, called mandats, to be secured by real estate belonging to the public, was provided for but, even before they could be issued, they fell to 35 per cent of their nominal value and, within six months of their issue, they had fallen to three per cent, Defeat seems to have been recognized by the decree of July 16, 1796, which, repealing all penalties against refusal to ac-

(Continued on page 52)

THE SOUTH RESURGENT

By
O. C. Huffman
President, Continental Can Company, Inc.

T is no longer news that business is better. Despite recurring moments of weakness which are an invariable aspect of the process of recuperation, some of them seasonal, and none of them apparently due to failure in the structural foundation, business is very much improved. It is now possible for business men to feel that if the corner has not been turned it has at least become possible to look around it, or in any event to observe that the rocky road along which the nation has been traveling does have a turning. Nowhere has this been more apparent than in the South, a fact which is particularly gratifying to a Southerner like myself, and one whose business has important alignments in the Southern States.

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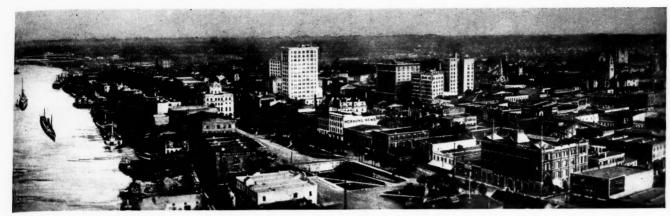
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All of these favorable circumstances find reflection in banking statistics. To mention one significant item, the Federal Reserve Bank of the Fifth (Richmond) District reported member bank deposits on April 11 of \$348,923,000 as compared with \$294,840,000, a year previous. Similar figures in the Sixth (Atlanta) District were \$3,737,748,000 as against \$2,273,730,000, and the March 1934 average deposits in the Dallas district were \$728,121,000 as compared with \$602,323,000.

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(Continued on page 56)



Airview Savannah's Business Section

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Thomas R. Jones

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CONSIDERABLE progress has been made along all lines of business endeavor during the past year by Savannah, Ga. This improvement undoubtedly will compare favorably with that of any other city of its size.

All the industries of Savannah have weathered the depression and have aggressively demonstrated their ability to overcome difficulties and reach out to new heights.

All industries are operating, more people have been given employment and payrolls have been generally increased.

With one of its foremost aims to aid in bringing about an improvement in the volume of business transacted, the Savannah Chamber of Commerce has ably handled the mass of details under the NRA regulations affecting large and small business concerns. Through its campaign of general education of the public to the tremendous changes in the business world, the NRA program was put into effect in the most advantageous and orderly manner in the local terri-

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> Anticipates Further Improvement Within Its

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Seaboard Terminals, Savannah Harbor



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THE SOUTH RESURGENT

By
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STEEL UNDER ITS

Code are founded are four in number, as follows:

Walter S. Tower

Executive Secretary, American Iron & Steel Institute

OPERATING under its code of fair competition, the Iron and Steel Industry has demonstrated beyond all question that self-government by a great industry is a feasible performance. Not that the administration of a code for an industry involving so vast a range of complex problems is devoid of extreme difficulties. It is in the meeting of these difficulties that the real test of self-government comes.

The administrators of the Steel Code are the thirty-two directors of the American Iron and Steel Institute, and the heads or important officers of leading steel companies. They have met the test imposed upon them through a spirit of submerging individual selfish interests in favor of decisions and policies for the broader good of the industry.

How successfully this has been done is indicated rather impressively by the fact that the Steel Code has won the approval, in the main, of an overwhelming majority of both producers and consumers of steel products.

To those aware of realities in the Steel Industry, it is a highly curious fact that so many persons labor under the misconception that competition is absent from the Steel Industry and has been for many years. As a matter of fact, no industry has seen keener and more pronounced competition. During the depression years, this competition reached destructive proportions. Leaders of the Industry recognized that the price discriminations and unfair practices which were rampant would not only destroy the Steel Industry itself but would have a seriously disturbing effect upon all industry. Accordingly, while the National Industrial Recovery Act was still in Congress and before its passage, the Steel Industry was well on with its task of devising a code of fair competition. This code was one of the first to be adopted and approved last August. Naturally, some few of those who were benefiting from unfair competitive practices now find causes for complaint.

The principles upon which the Steel

Four Basic Principles

- 1. Employes are entitled to fair wages, a continuance of which is necessary in order to sustain public purchasing power.
- 2. Available employment should be distributed among the largest possible number of workers.
- 3. In order to perform its distinct obligation to employes and to stockholders and to maintain the integrity of capital and investment, the Industry must earn a fair and reasonable profit.
- To accomplish these ends, it is important that secret price cuts, undercover concessions, discriminations, and other unfair competitive practices be eliminated.

In short, the Steel Code seeks to establish fair methods of conducting the Steel Industry in order to secure an adequate wage, a proper spread of employment, a rate of earning which will insure continuous operation and employment, and, if and when possible, a fair return to stockholders.

Tangible Benefits

In the Code, the most tangible benefits have accrued first to labor. Wages have been increased on two occasions since the adoption of the Code: in August last year and at the beginning of April this year. These wage increases, together with a reduction in hours, have resulted in increasing the hourly wage rates of steel mill employes 36 per cent to a point fully 7 per cent above the rate in 1929.

More than 80,000 men have been added to steel mill payrolls over recent months. Improved labor conditions have increased steel company expenses at the rate of more than \$70,000,000 annually.

How is the Steel Industry to support this large increase in its cost? Surpluses of many companies in the Industry have been sadly depleted of recent years. During 1933 and 1932, there was a combined net loss for eleven important producers of steel of about \$180,000,000. Obviously the Industry can only support present wage and employment levels through greater volume of business and an improved price structure.

General price increases were announced early in April for steel products but these new prices do not become effective for any substantial proportion of output until the beginning of the third quarter. Contrary to general belief, steel prices suffered serious declines during the depression. It is a fact, not

generally recognized, that the post-war peak of steel prices came in 1923. There was an almost uninterrupted recession from that year until the Spring of 1933, The advance since then has been substantially less than the percentage increase in general wholesale commodities. Even when the new advances become effective, the price level will be no more than 16 per cent over that of March 1933, while general wholesale prices are up 25 per cent. Finished steel prices are still well below the 1929 level and 21 per cent below the peak reached in 1923,

While it is true that the Code has been far from resulting in sharp general advances in steel prices, a better underlying strength in the market structure has appeared. The first commercial benefits have been in the elimination of undercover price cutting and discriminations of various kinds. The inauguration and enforcement of a detailed system of rules and regulations for fair competition in the Industry had the desired result in bringing about a condition which is more fair and satisfactory than formerly, alike to consumers and to producers.

Open-Price Provision

Much furore has been raised about the open-price provision of the Steel Code and others. Most of this criticism has come from persons with no practical knowledge of the matters discussed.

The Steel Industry stands squarely upon the open-price provision as set out in the Steel Code. The purpose of this provision is to eliminate discrimination in the selling of steel and it was the belief of those who framed the Code that such was in harmony with the purpose of the National Industrial Recovery Act.

Without the open-price provision of the Steel Code, the Industry would be practically helpless in making any effective contribution to the recovery effort.

Open and fair prices for steel products are not only necessary to support the wage level incurred by Code operation, but they are also of definite benefit to fabricators and buyers of steel. Users have been benefited by the fact that speculation in steel prices has been abolished and through the elimination of secret rebates and other concessions which were formerly prevalent.

One Price Principle

Under the Steel Code, there is one price principle for all users. As a result of this provision, the small user is not put at a disadvantage by price concessions given to a large user in the same line. This matter of quantity discounts is one of the most mooted points in the Code, but the administrators of the Code have steadfastly stood against the introduction of quantity discounts because

(Continued on page 58)

WORLD'S LARGEST AIRPORT RESERVATION

To date \$7,000,000 has been appropriated for Barksdale Field, Louisiana, in course of construction on the 23,000-acre tract donated by the City of Shreveport, to the U.S. Government, for bombing range, machine gun range, flying field and housing area. Barksdale Field is to be the home of the Third Attack Wing of the U. S. Air Corps, which consists of Wing Headquarters, Pursuit Group, Air Corps Troops, and detachments of Medical Corps, Quartermaster Corps, Signal Corps, Finance and Ordnance. It is the largest airport reservation in the world.

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Development of the project is under the direction of the Construction Division of the Quartermaster Corps of the War Department, Construction activities are going forward under the direct supervision of Captain George E. Lamb, Constructing Quartermaster.

In October, 1932, the Twentieth Pur-

Housing Facilities at Barksdale Field, La.

suit Group was transferred from Mather Field, California, to Barksdale Field, at which time the post became a link of the nation's chain of air defense.

Construction began in 1931 and has been going on continuously for the past three years.

The buildings are of French Colonial design, Major structures are of reinforced concrete, curtain walled with tile and stuccoed. Homes of commissioned and non-commissioned officers are semifireproof with exterior walls stuccoed and with hip roofs covered with tile.

SCHEDULE

Construction projects recently completed are as follows:

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Barracks, \$114,400, W. Murray Werner. Shreveport, La.: Landing Field Drainage, \$78,448, G. J. Roberson Co., Pine Bluff, Ark.; Garage Bldgs, \$29,359, Maples Constr. Co., Shreveport, La.: Paving and Sidewalks, \$125,546, Barber Bros. Constr. Co., Baton Rouge, La.; Paved Roads, \$68,248, Flenniken Constr. Co., Shreveport, La.; Barracks, \$335,100, Worsham Bros., Knoxville, Tenn.; Hospital, \$223,100, Henry B. Ryan Co., Chicago, Ill.; 42 Officers' Quarters, \$504,361, S. & W. Constr. Co., Memphis, Tenn.; Q. M. Warehouse Add., \$17,897, Maples Constr. Co., Shreveport, La.; Paved Roads, Take-off Runway, \$18,700, Flenniken Constr. Co., Shreveport, La.; Foundation Bachelor Officers' Quarters, \$8,086, W. Murray Werner,

Shreveport, La.; Storm Sewer and Wtr. Service, \$26,335, H. A. Forrest, New Orleans,

Projects now under construction:

La.

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13 N.C.O. Double Qtrs., \$177.708, Landis & Young, Bloomington, Ind.; Air Corps Mch. Shop & Q. M. Garage unit, Bachelor Officers' Qtrs. and Comd. Officers' home, \$230,000, Worsham Bros., Knoxville, Tenn.; Paved streets, parking Areas, side walks, \$71,141, Flenniken Constr. Co., Shreveport, La.; Garage Buildings, \$25,900, Maples Constr. Co., Shreveport, La.; Street Lighting, \$8,500, John T. Maples, Fairbury, Ill.; Electric distribution, \$9,800, Broome Elec. Co., Amarillo, Tex.; 2 Headquarter Bldgs., 34 Officers' Quarters, and Officers' Mess, \$549, 075, R. P. Farnsworth Co., New Orleans, La.; Addition to the Gasoline Fueling System, \$21,316, Aqua System, Inc., New York, N. Y.: Paved aprons, runways and Drainage, \$184,747, Flenniken Constr. Co., Shreveport, La.; 2 Double Hangars, \$32,492, James T. Taylor, Fort Worth, Tex.; 8 Ordnance Magazines, \$22,000, Worsham Bros., Knoxville, Tenn.; Ordnance Warehouse, \$21,700, Landis & Young, Bloomington, Ind.; Heating for Hangars, \$29,700, Joth Plumbing & Heating Co., Shreveport, La.; Bakery, \$13,-195, W. A. McMicheal, Shreveport, La.; Extension of Utilities, \$35,000, O'Toole Constr. Co., Monroe, La.

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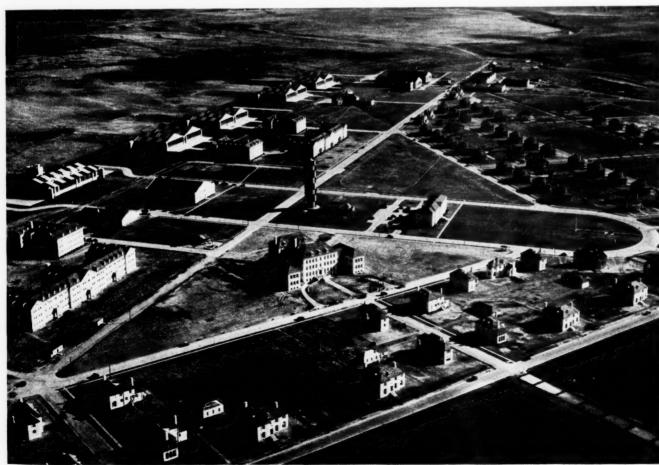


Photo by U. S. Army Air Corps

\$234,716,000 CONTRACTS LET IN FIRST FIVE MONTHS

during the first five months of this year covering engineering, building and construction projects undertaken in the sixteen Southern states had a total valuation of \$234,716,000, a compilation, based on reports published in the Manufacturers Record Daily Construction Bulletin. The five-month total exceeds by 136 per cent the figure of \$99,277,000 representing the value of contracts awarded in the corresponding period of 1933.

During May construction awards in the Southern States amounted to \$48,-471,000, compared with the April total of \$43,231,000. During the first three months of 1934, contracts let for all types of engineering and construction work in the states from Maryland to Texas aggregated \$143,014,000, the monthly totals being: January, \$45,807,-000; February, \$45,488,000, and March, \$48,656,000

Private building operations in May did not reach the high level set in April, but the total for this major classification compared favorably with awards in the early months of the year. During May awards for apartment houses and hotels, bank and office buildings, churches, dwellings and stores totaled \$2,746,000, compared with the April total of \$4,517,000. During the first three months of 1934 general building awards amounted to \$7,508,000, the monthly totals being as follows: January, \$2,551,000; February, \$2,011,000, and March, \$2,946,000. In the five-month period private building operations placed under contract called for an investment exceeding \$14,771,000.

In the value of awards, dwelling construction, represented by a total of \$9,034,000, leads private building work. Stores, for which contracts totaling \$2,126,000, were let in the five-month period hold second place. Bank and office construction involving an expenditure of \$1,492,000, \$\frac{1}{2}\$s third, followed closely by the apartment and hotel total of \$1,396,000. A pick-up in church building work is indicated by the award in the five-month period of contracts calling for an outlay of \$583,000.

Residential construction promises to figure prominently in the South in the near future as a result of the advance toward the "bids asked" stage of subsistence homestead projects sponsored by the Federal Government.

Inability to finance renovation and repair work and new dwelling construction through normal channels—building

and loan associations and savings banks has been the major deterrent to a revival of home-building in volume. Whether financing schemes backed by the Government will be successful in influencing home-building on a large scale is problematical. Apparently the plan is to offer aid almost exclusively to "distressed" home buyers as the bill terms them or those already granted loans by the Home Owners' Loan Corporation. Meanwhile, under the codes prices of building materials have mounted steadily and labor costs have approached 1926 levels, thus discouraging investment in new construction.

The volume of store building work undertaken in recent months is decidedly encouraging, since it indicates that conditions in the South have improved and is recognized by investors. Store construction has always been a good barometer of business conditions. Independent operators are building new stores, enlarging existing establishments. Chain institutions, too, are investing heavily in new locations, building entirely new stores, enlarging present stores and modernizing facilities through the installation of the most upto-date types of equipment. Department stores' improvement programs call for heavy expenditures for escalators, high speed elevators, air-conditioning systems, new lighting units and other items. So it is, that in widely scattered sections of the South new stores replete with every modern facility are under construction.

Public building operations in the first five months of this year call for an outlay of \$51,262,000, of which \$14,532,000 represented awards for school building construction. City, county, government and state buildings placed under contract in the period January to May, inclusive call for an expenditure of but \$36,730,000.

Road-building with \$98,776,000 in awards in the five months' period heads the list of major classifications, with industrial and engineering projects in second position with awards totaling \$69,-907,000. During May contracts let for road, street and paving work in the South totaled \$20,646,000, the highest monthly total this year, particularly significant in view of the very high level at which road lettings have been undertaken each month since the fall of 1933. Costly bridges are an outstanding feature of road-building activity in the South, calling for unusual engineering and construction methods.

SOUTHERN CONSTRUCTION ACTIVITY

50011101111		y, 1934	Januar	January—May,1934	
		Contracts		Contracts	
	Contracts	to be	Contract		
Cananal Duilding	Awarded	Awarded	Awarde	d Awarded	
General Building Apartment and Hotels	\$ 418,000	\$ 307,000	\$ 1.396,000	0 \$ 7,707,000	
Association and Fraternal		4		, .,	
Bank and Office	215,000				
Churches	36,000		-,,		
Dwellings	1.627.000				
Stores	400,000				
	\$ 2,746,000	\$ 3,243,000	\$ 14,771,000	\$ 32,349,000	
Public Building					
City, County, Government and					
State				\$ 36,334,000	
Schools	4,425,000	2,752.000	14.532,000	41,722,000	
	\$ 8,010,000	\$ 5,718,000	\$ 51,262,000	\$ 78,056,000	
Roads, Streets and Paving	\$20,646,000	\$15,501,000	\$ 98,776,000	\$ 67,249,000	
Industrial and Engineering Project	ets				
Dredging	\$ 431.000	\$ 2,867,000	\$ 9,106,000	\$ 24,582,000	
Filling Stations, Garages, etc	504,000	253,000	1,204,000	2,181,000	
Industrial Plants	11,941,000	16,763,000	31,853,000		
Levees, Revetments, Dikes, etc	1.035,000	2,225,000	11,089,000		
Sewers, Drainage and Waterworks	3,158,000	7,290,000	16,655,000	62,691,000	
TOTAL	\$17,069,000 \$48,471,000		4	\$193,396,000 \$371,050,000	



Teletypewriter Service saves money. The Hazel Atlas Glass Company says: "Sales costs have been reduced."

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It speeds operations. Kelly-Springfield Tire Company says: "It lets us conclude important matters in minutes, which formerly took hours or even days."

It means satisfied customers. The Republic Steel Corporation says: "It enables us to give better service to our customers than has ever been possible before."

It keeps production close to demand. The Tubize Chatillon Corporation says: "It lets us take advantage of market conditions affecting commodity prices, and expedite shipments of

supplies, resulting in a reduction of our inventory of maintenance stocks."

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IRON, STEEL

AND METAL MARKET

of the steel industry early last month rose to 61 per cent-two points higher than the 1933 peak of 59 per cent-then receded, operations in the closing week being 60 per cent. Although the general trend at the end of May was downward. steel heads were encouraged because the seasonal recession came about one month later than usual.

What resulted in the rebound in the operating rate following a drop of 3 points from the high figure in May is not clear. Some hold that it was due largely to a desire to get out steel on contracts before plants are forced to shutdown in event of strikes. However, most steel men take a hopeful view of the labor situation, pointing out that the revised steel code, which goes into effect June 11, grants certain concessions to labor.

The operating rate for May is not expected to be maintained, and declines are looked for during June and into the third quarter. However, the good showing in May was made in the face of sagging production in the automotive industry, normal at this season; labor troubles: continued drought throughout the Central West, and uncertainties as to administration policies. An easing off in scrap prices-regarded as the most sensitive barometer of the trademay portend a decline in the steel operating rate.

Encouraging Factors Seen

On the other hand, decreases in motor car prices put into effect June 1 may so stimulate production that buying in volume by manufacturers may shortly develop. Speculative accumulations of unfinished and finished products have not been appreciable. Various industrial building projects-entirely new enterprises or expansions of existing plants. major bridges of steel and reinforced concrete construction, and new buildings -Federal and private—to be placed under contract shortly call for an apprecable tonnage of steel in the aggregate.

Moreover, if the operating rate can be maintained at about the 50 to 55 per cent mark steel heads are agreed that most companies will be enabled to earn something on their investment. Some price concessions may necessarily have to be made to stimulate renewed buying. Under the code, once prices are fixed for a quarter they cannot be advanced, but it is possible to lower them. At the

THE operating rate moment it is unwise to hazard a predict he like. Indications are that projects tion as to price movements, for the trade has had no experience with code operation in a declining volume of business.

> Complaints against present price levels are heard, and it is rumored that some of the small producers may yield to the pressure of consumers and make concessions, thereby creating a "buyer's market." But price advances were essential in view of labor's shortened hours coupled with basic wage rate increases. From the standpoint of the steel producer the higher price levels are unfortunate when consumers cannot or will not pay such prices.

Wage Rates 7 Per Cent Above 1929 Level

Pay rolls in the industry were larger by \$4,208,000 in April than during the preceding month, and employment gained 11,800. Employment rose to 431,000, of which number 392,000 were wage earners, or approximately 93 per cent as many wage earners as were employed at the peak of operations in 1929. Moreover, the average hourly earnings among wage earners was 64.8 in April, compared with 58.9 in the preceding month, bringing the current rate to 7 per cent above the 1929 wage level.

Pig Iron Production Shows Sharp Increase

Pig iron production gained sharply last month, reaching a new high since April. 1931. Besides, the output in the fivemonth period this year represented close to 150 per cent increase compared with production for the like period of the preceding year. At the close of May five more furnaces were in operation than at the beginning of the month. Producers anticipate shipments during June will show a substantial gain over those of the preceding month.

A pickup in demand for cast iron pipe, machinery entering into a variety of industries, and a general improvement in business are responsible for the increased consumption of pig iron. In recent months PWA grants have been approved for scores of sewer and water works projects in all parts of the countryapplications for which have been pending for months—thus making it possible to award contracts calling for many miles of pipe, a large tonnage in the aggregate of standard and special castings, fire hydrants, pumps, valves and of this character will figure prominently in near future lettings.

Small Companies Made Best Financial Showing In 1933

Small, independent companies in the steel industry fared better than their larger competitors in 1933, a report covering 190 firms, representing more than 90 per cent of the capital invested in the industry, released by the American Iron & Steel Institute reveals. The report shows that 57 integrated companies, with a total investment of \$4,323,000,000, had a combined net loss of \$64,668,000. while 133 companies, with an investment of \$494,668,000, had combined net earnings of \$51,104,000 for 1933.

The return on investment for the 133 small companies amounted to 1.83 per cent, while the loss reported by the 57 large companies was 0.75 per cent.

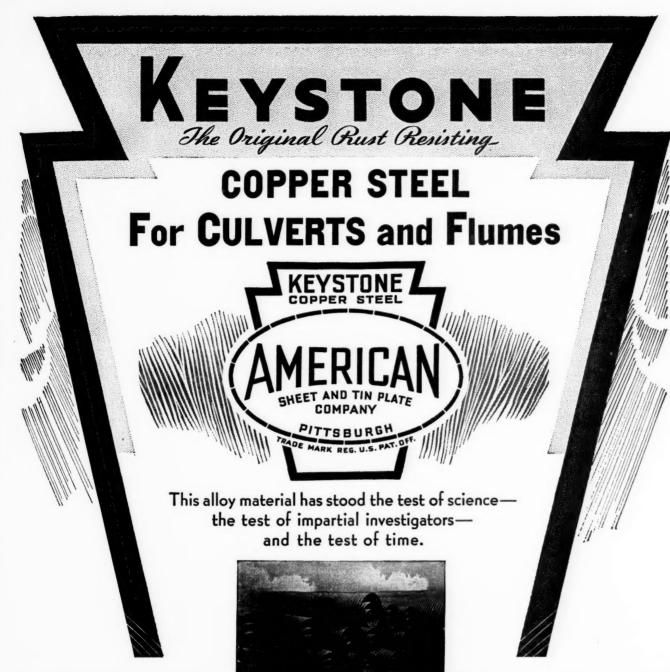
Stockholders in the 133 small companies, which have only about 10 per cent as much capital investment as is reported by the group of large companies, received 54 per cent as much in dividends as stockholders of the larger companies. These facts, according to the Institute, do not bear out assertions that have been made that the steel code has given an advantage to big producers over the small ones in the industry.

Bright Outlook In Birmingham District

Fabricators and manufacturers of iron and steel products in the Birmingham district are encouraged by the generally improved industrial outlook. In addition to the business booked during May. business in sight calls for cast iron pipe, reinforcing steel bars, structural steel, plate steel and other shapes, and a variety of machinery items. Not only are fabricators of the district receiving contracts for projects put under way in the South and Southwest, but from the West Coast and the Colorado River development.

Car building contemplated calls for underframes and parts requiring a large tonnage of steel. Box cars, to be double sheathed, also call for the use of much steel. Meanwhile, rail mills are working on backlog orders.

While cast iron pipe business has not been as brisk as anticipated, business booked and in sight is sufficient to encourage producers. Other foundries melting pig iron report prospects for the summer months bright.



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CINNATI, OHIO - Union Trust Building
Verr. COLO. - - First National Bank Building
Cific Coast Distributors—Columbia Steel Company, San Fran

GOOD ROADS AND MOTOR TRANSPORT

\$383,460,000 Emergency Highway Construction

With an estimated cost of \$383,460,000, a total of 7,836 emergency construction projects of public works highways had been advertised for contract, begun by day labor employed directly by the highway authorities, or completed, up to May 26, according to the United States Bureau of Public Roads. The cost of day labor projects included in this total is estimated at \$27,585,000. Of 7,349 projects awarded for construction, 4,991 were in course of construction on May 26, and 1,515 had been completed. Work under construction, which is estimated to cost \$285,847,000, was giving regular employment to 173,754 men, while work under way or completed involved 90 per cent of the \$400,000,000 provided for public works highways under the National Industrial Recovery Act.

Completing Emergency Road Program

Nearly 95 per cent of Texas' \$24,000,-000 allotment for emergency highway construction is involved in work already under contract reports Gibb Gilchrist, State Highway Engineer. Included in the program, and under contract, are 1,438 miles of grading and bridges, 793 miles of surfacing and pavement, and 38 miles of railroad grade separation. This involves the direct employment of 32,000 men, and the maintenance of 128,-000 persons, allowing three dependents for each wage earner. The work is now at its peak, but will slump sharply, it is declared, unless an additional appropriation is made by Congress and Texas receives another substantial allotment. Many important gaps in the road system remain to be closed and there are many more major projects which could be started at once if a new appropriation were forthcoming. As road-building is regarded as one of the soundest of all unemployment relief methods, it is to be hoped that Congress will make adequate provision for continuing the

Highway Association Elects

Meeting at Tallahassee, Fla., and attended by approximately 50 representatives from eleven Georgia and Florida cities, the Franklin D. Roosevelt Highway Association elected W. B. Haley, of Albany, Ga., permanent president. W. T. Edwards, of Jacksonville, Fla., secretary

of the Gulf Coast Highway Association, was named vice-president, and Miss Hattie Hardy, of Albany, Ga. secretarytreasurer. A resolutions committee was elected as follows: George Perkins, Tallahassee, Fla.; J. A. Davis, Albany, Ga.; W. F. Marsh, Pensacola, Fla.: Walter Pike, Columbus, Ga., and W. E. Beverley, Thomasville, Ga. In 1933, the Georgia Legislature routed the proposed highway through the cities of Atlanta, Warm Springs, Columbus, Albany and Thomas-

State Gasoline Taxes

Gasoline taxes collected in 1933 yielded a revenue to the States of more than \$319,000,000 as compared with \$514,138,-000 in 1932, reports the Bureau of Public Roads. This does not include tax returns from the Federal gasoline tax. Consumption of gasoline exceeded 14,-000,000,000 gallons and was slightly less in 1933 than in the previous year.

There was a noticeable increase in the diversion of funds to other than highway purposes and also an increase in funds allocated to local roads.

State gasoline tax collections in the Southern States amounted to \$170,902,-000 of which aproximately \$110,000,000 was allocated for road construction and maintenance, \$43,000,000 for bond payments, more than \$16,000,000 was diverted for other than highway purposes and about \$1,000,000 represented collection and administrative costs.

\$1,800,000 Annually For Maintenance West Virginia Secondary Roads

For the construction and maintenance of the secondary road system of the State, the West Virginia Legislature recently appropriated \$1,800,000 annually. According to Ernest L. Bailey, Commissioner, this sum represents possibly onefifth of the total heretofore expended by the various counties for this work. In view of the fact that maintenance activities must necessarily be limited because of the restricted appropriation. the State has been divided into ten districts, each embracing four to six counties, dependent upon area.

A supply center, as well as a central point for storage of machinery and equipment, has been provided in each county. Under lease agreements, the State Road Commission is at present cost of several millions of dollars.

using machinery belonging to the county courts, restricting operations to the particular county to which the machinery belongs. To maintain proper maintenance, however, the Commission recently purchased \$800,000 of modern machinery which will be pro-rated with practically the same amount of equipment in each county.

Completing Road Work In Oklahoma

Oklahoma is one of the few States in which road construction in the Federal relief program is nearing completion. The State has completed 91.57 per cent of its \$9,216,789 Federal relief highway program, according to Chairman H. N. Arnold of the State Highway Commission, and nine of thirteen projects remaining in the program have been submitted to the United States Bureau of Public Roads with a request for permission to advertise for bids. Two projects, scheduled for award May 29, were not considered. The amount of work now under contract totals \$3,439,413.

Garage Mechanic Services Taxable

The tax department of West Virginia has ruled that the services of a garage mechanic are subject to the two per cent consumers' sales tax, the only item exempt in garage service or sales being gasoline. It was also ruled by the department that services by trucks, moving vans or tractors are taxable.

Maryland Planning Roadside Control

In order to ascertain what Maryland may do to control roadside development for the protection of its elaborate highway system, the State Planning Commission has undertaken a study of what other States are doing along this line, according to Abel Wolman, Baltimore, chairman of the commission. The commission has been collecting data for several weeks, supplementing the work which has been undertaken by a subcommittee headed by Harry D. Williar, Jr., chief engineer of the State Roads Commission.

The proposed study was announced in reply to a question relating to recent proposals for State-owned filling stations along the new Philadelphia road which is planned for construction at a



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JUNE NINETEEN THIRTY-FOUR

EQUIPMENT

NEW AND IMPROVED

Automatic Bottom-Dumping Semi-Trailer

The Sanford-Day Iron Works, Inc., Knoxville, Tenn., manufacturers of automatic bottom-dumping rail cars, are now producing an Automatic Bottom-Dumping Semi-Trailer, with door mechanisms and automatic features the same as used on the rail cars. At the dumping station a simple device at the side of the road trips the door latch levers automatically as the trailer passes by, while another device in the middle of the roadway automatically closes the doors as the trailer moves along. The operation of discharging the load and reclosing the doors is accomplished in ten or fifteen seconds as the trailer is in motion. Where it is desired to operate a plurality of units in a train, fourwheel type trailers are used.

ADSCO Piston Ring Expansion Joint

The American District Steam Company, North Tonawanda, N. Y., which recently put on the market the ADSCO Piston Ring Expansion Joint, has decided to incorporate the piston ring feature in its joints for practically all pressure standards, instead of the 400-pound pressure standard only.

Diesel Portable Compressors

Evidencing economy of Diesel power, the Gardner-Denver Company, Quincy, Ill., is introducing its new Diesel Portable Compressors with a comparative fuel test showing savings which may run as high as \$5.38 a day. These new Gardner-Denver Portables are powered with the "Caterpillar" Diesel Engine, and in a fuel consumption and fuel-cost test, the 360 model operating in comparison with a gasoline portable of the same size showed a saving of 67.3 cents per hour. Savings on other Gardner-Denver Diesel Portable models are said to be proportionate.

Gardner-Denver Compressor



Steam Locomotive That Burns No Fuel

Wages of a single operator, an occasional charge of steam from a stationary boiler, and a little oil and grease constitute the entire cost of operating a steam locomotive built by the Heisler Locomotive Works, of Erie, Pa. for the Newport Industries, Inc., Pensacola, Fla. The locomotive is equipped with a tank of electrically-welded construction of about three times the capacity of an ordinary locomotive boiler. This tank, heavily lagged and jacketed to prevent loss of heat, is filled with water to approximately four-fifths of capacity. By a steam pipe run from a stationary boiler to a point below the level of the water in the tank, the water is heated



Fireless Steam Locomotive

until the pressure and temperature in the locomotive tank are the same in the stationary boiler from which the charge is being taken. On the locomotive illustrated, the tank has a working pressure of 215 lbs. and was built by Struthers-Wells Company, Warren, Pa.

The locomotive may be charged from any stationary boiler carrying a pressure of 100 lbs. or more, and one charge may last from two to ten hours.

Special Production Saddle For Engine Lathes

To meet production problems in medium size and small shops, the South Bend Lathe Works, South Bend, Ind., recently developed a special production saddle for use with regular 13-inch, 16inch and 18-inch swing screw cutting precision engine lathes. The saddle is called the Multiple Tool Base Saddle, designed especially for mounting special tool holding blocks for multiple tool machine work. It is extra heavy with a wide dovetail, upon which is mounted a slotted table. Multiple tool holding blocks may be mounted on this table, both front and rear, to obtain the desired tooling set-up. The saddle is connected with the automatic longitudinal feed and has automatic cross feed.

"Air-Lode-Carriers"

The manufacture and sale of rubbertire replacement assemblies formerly designed and sold by E. H. Anderson Company of Chicago, have been taken over by The LaPlant-Choate Manufacturing Company, of Cedar Rapids, Iowa. These units will be known as "Air-Lode-



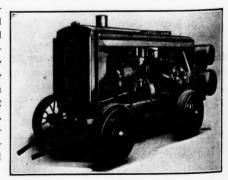
LaPlant-Choate Carrier

Carriers", the manufacturers claiming that they may be used to replace tracks on all types of wagons, and because of easier rolling resistance by actual test, effect a fuel-saving from the tractors hauling them of as high as 35 per cent. The rubber replacements mean a considerable saving in dead weight. The units will be sold through regular La-Plant-Choate dealers throughout the country.

Oil-Engine-Driven Compressors

Doubling its line of two-stage, air-cooled portable air compressors, Ingersoll-Rand Company, New York, now offers six sizes with oil-engine drive, as well as with gasoline-engine drive. The oil engine, known as "Type H", is a 4-cycle, solid-fuel-injection, spark-ignition unit combining advantages of both the gasoline and Diesel type of engine. The six sizes of the two-stage, air-cooled portable compressor have capacities, respectively, of 75, 125, 185, 250, 370 and 500 cfm, either gasoline or oil-engine driven. Both types are described in Bulletin No. 2100

Type H Oil-Engine Drive



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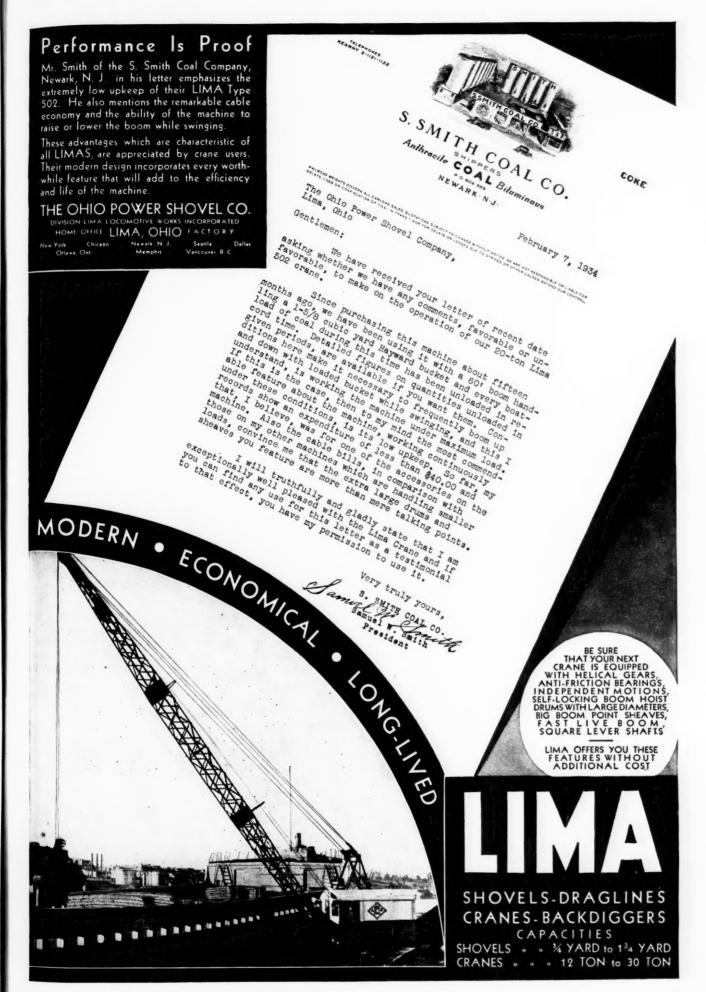
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Deposit Insurance Record

After six months of operation, the Federal Deposit Insurance Corporation announces that 14,000 banks are enjoying the benefits of deposit insurance and there have been no failures. Insured deposits exceed \$15,700,000,000, divided into 56,000,000 accounts. Taking the first five months of each year for ten years from 1923 to 1932, a total of 3,745 banks failed in the United States. In the 6 months of deposit insurance two state banks located in Pennsylvania and Illinois have encountered difficulties, but it has not been determined whether the amounts insured will reach the point of being a claim against the Insurance Corporation or not.

Payment on RFC Advances

The banks of the country that have borrowed from the RFC made a remarkable comeback in payment on the debt. It is announced that 72 per cent of the amount borrowed has been repaid. Of further interest is the fact that on loans actually disbursed for all purposes by the RFC, amounting to \$3,189,000,000, payments totaling \$1,427,000,000 have been made.

Opportunity for the Treasury

The point is brought out in financial papers that the Treasury Department has a present unusual opportunity to transfer a considerable part of its short-term obligations into long-term bonds. Maturities of the government in the next twelve months will foot up \$4,615,000,000. Bank reserves are at a high point and interest rates are low, so that the proposition is attractive. Recent Treasury short-term bills were sold at the very low figure for interest of 0.06 per cent per annum.

Gold Reserves

Gold assets of the government on May 18 reached the tremendous total of \$7,756,969,650. On May 10 there was a sharp decline, but following that the total ascended rapidly. Whether the temporary drop was caused by buying silver to build the silver monetary reserve, anticipating action by Congress, is not definitely known.

Government Power Developments

A matter of great interest to investors in power and utility bonds and stocks, is the urging by certain members of Congress that the government power program, as put into effect at Muscle Shoals, be extended as rapidly as possible into other sections.

The coal miners' union and others have registered strenuous objections to this policy, not only because of its effect upon private industry, but the displacement of steam plants in the areas involved will, it is believed, throw many coal miners out of work. The early adjournment of Congress, it is expected, will prevent for the time being further action by the government along the lines mentioned.

Number of Banks

Since 1921 the 30,812 banks of the country have dwindled to 15,370, a decline of 50 per cent. There is now one bank for every 8,200 persons, as contrasted with one for every 3,400 persons in 1921.

(Continued on page 36)

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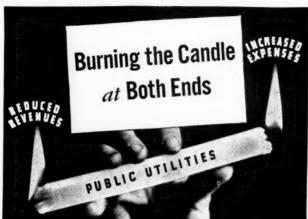
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Rate reductions reduce revenues. Expenses are increasing due to NRA, higher taxes, and the cost of government investigations. Continuation of this trend will make it difficult to earn even operating expenses and taxes.

There would have been \$12,496,-000 more for investors in 1933 if the Associated Gas & Electric System had received 1928 electric rates, paid



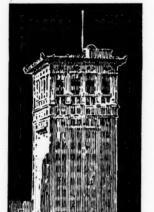
taxes at the 1926 rate, and employees had not been insured.



The Associated Gas and Electric Plan of Rearrangement of Debt Capitalization aims to protect investors against adverse developments that cannot be controlled by management.

ASSOCIATED GAS & ELECTRIC SYSTEM, 61 Broadway, New York

Ready to meet



ANY BANKING TEST

Manufacturers increase their banking connections and check over their present banks when increased business makes it necessary to do so.

In considering Richmond, we invite you to test its oldest, largest bank by your strictest standards.

FIRST AND MERCHANTS National Bank of Richmond

JOHN M. MILLER, JR., President

The products of GROUP INSURANCE

always can be seen.

Dollars delivered, burdens lifted, gratitude expressed. Every claim payment leaves these favorable impressions.

We have a booklet ready for employers



THE PRUDENTIAL
INSURANCE COMPANY OF AMERICA
EDWARD D. DUFFIELD, Prosident
HOME OFFICE, NEWARK, N. J.

FINANCIAL NEWS

(Continued from page 34)

Farm Credit Administration

The Farm Credit Administration attained its first anniversary May 28. It loaned an average of \$3,490,000 for each and every day of its first year, or a total of \$1,273,000,000.

The Act passed a year ago consolidated all farm lending activities of the government in one organization, with principal objectives to stop farm mortgage foreclosures and establish a low cost credit system for farmers. Under this program 317,000 farm mortgage loans were used by farmers t_0 pay old debts.

Fears of Inflation

An article in this issue by L. F. Loree, President of the Delaware & Hudson Railroad, deals with the harmful effects of inflation in other times. This matter of inflation is of the ntmost importance to every citizen, because while supposed to benefit the debtor class it in reality penalizes thrift and affects every life insurance policy holder and every one who has a savings account or a fixed income. Stable values are destroyed by it and although it might bring a temporary splurge of activity, the cost would have to be met through tribulation later on. While there has been improvement in business in the last twelve months, fear of inflation will not down and it causes investors to hesitate. Some think, in face of the activity we have had and with 10,000,000 people said to be unemployed, we are not proceeding along the right road to gain the full swing of business. While we are trying to spend ourselves into a state of prosperity, fear is expressed that sooner or later we shall have to recognize supply and demand, that economics are not a matter of artificial boosting but that some of the things done will have to be undone before confidence fully returns.

The Silver Bill

Boiled down, the Silver Purchase Act contemplates bringing the metallic base of our currency where 75 per cent of it will be gold and 25 per cent silver. There is no doubt of the fact that it is inflationary in its purpose, but whether it will be carried to a hurtful point depends on how the Administration uses the authority given it in the bill. The Secretary of the Treasury is authorized to purchase silver at home or abroad whenever and upon such terms as may be considered advisable, but not above the rate of \$1.29 an ounce. Buying must stop when the 25 per cent ratio is reached and not more than 50 cents an ounce may be paid for silver which was in this country May 1, 1934.

When the 25 per cent ratio is exceeded, the Administration is authorized to sell silver as long as this condition remains. Silver certificates are to be issued against silver purchases. With the present monetary gold stock at about \$7,750,000,000, to attain the full aim expressed in the bill it will be necessary to purchase approximately \$2,500,000,000 of silver. Deducting \$841,000,000 silver already in use as money, about \$1,659,000,000 more will have to be acquired to bring about the ratio stated above. All estimates of how much would have to be bought and the price necessary to be paid will vary with the changes taking place while the program is being carried out.

Foreign Bond Defaults

Foreign bonds to the amount of between five and six billion dollars were nominally outstanding in the United States March 1. The amount of those in default on interest held by American investors, is estimated as being nearly two billion dollars.

WIDER HORIZONS

THE rural community—the classic "small town" of Lewis, Tarkington and Twain—faces a new future. Electric service and all that electric power and light mean to home life, commercial stimulation and industrial development, have carried urban advantages and opportunities throughout the countryside.

The small community supplied from integrated, interconnected electric transmission systems today has the ability to invite and foster the development of a healthy industrial life. It has the ability, by virtue of adequate electric resources, to capitalize the opportunities presented by trends toward industrial decentralization. With an electric service which, in its character, quality and reliability, compares favorably with the largest centers,

these communities have the opportunity to benefit from industrial expansion or the changes arising from economic shifts.

No overnight outgrowth this—but the resultant of long years of plans and policies devoted to these aims; studied, measured, weighed, engineered for permanence, stability, adequacy and economy.

The human and social values of these contributions to American progress far outweigh the intrinsic price of electricity, consistently lower though its course has been.

The country has "come to town"—electric power and light has improved living conditions, cast off the shackles of older, costlier methods, lifted burdens of human toil and widened the horizon of commercial, industrial and community opportunity.

Commonwealth & Southern
CORPORATION

JUNE NINETEEN THIRTY-FOUR

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The New

WBAL

Maryland's Only High Power Station

IS NOW AVAILABLE 7 DAYS A WEEK—

Day and Evening for Spot Broadcasting.

NEW EQUIPMENT

NEW LOCATION

More radio listeners in its high grade service area than any other eastern station south of Philadelphia

FREDERICK R. HUBER, *Director*Baltimore 10,000 Watts Assoc. N. B. C.

WE ARE PLEASED TO ANNOUNCE THAT

CARROLL B. HUNTRESS

WHO HAS BEEN SERVING AS EXECUTIVE SECRETARY

OF THE

NATIONAL COAL ASSOCIATION

HAS BEEN ELECTED PRESIDENT OF

APPALACHIAN COALS, INC.

AS OF MAY THE FIRST

WE BESPEAK ON HIS BEHALF THE CONTINUATION OF YOUR PAST CORDIAL COOPERATIVE RELATION-SHIP WITH OUR ORGANIZATION

APPALACHIAN COALS, INC.

J'AMES D. FRANCIS, PRESIDENT

Cincinnati, Ohio April 30, 1934

EDITOR'S DESK

The Darrow committee report is not so prominent in the press just now and more mature reflection upon it has brought doubt as to its importance. Criticism of the NRA was met with countercharges of inadequate investigation and when its recommendations were studied, the effect of the report was minimized because of its advocacy of socialistic government.

New LIFE INSURANCE written for the first four months of 1934 amounted to \$2,895,653,000, an increase of 16.1 per cent over the corresponding period of 1933. New ordinary insurance amounted to \$1,898,266,000, a gain of 11.2 per cent; industrial insurance \$842,397,000, a gain of 19 per cent; and group insurance \$154,990,000, a gain of 97.6 per cent over the first four months of 1933.

As stated by the president of the Northwestern Mutual Life Insurance Co., American life insurance companies in the past four and a half years of the depression paid out to policy-holders and beneficiaries, in cash, more than \$13,000,000,000 and during these same years increased their asset more than \$3,500,000,000. These payments preserved families they saved businesses and investments and they protected the public against a greater public relief burden.

PRESENT AND PLANNED IMPROVEMENTS of the Everglades of Florida it is said, will involve the expenditure of \$10,000,000 of government money. There are supposed to be 3,000,000 acres of land which will be available for cultivation, while according to the Florida Times-Union only about 30,000 acres are now being used for productive purposes. Sugar cane accounts for 12,500 acres, winter vegetables about 12,000 acres and miscellaneous crops for the balance.

Winter vegetables shipped North from this section reach a volume of 30 to 60 carloads daily during the peak of the season

The Times-Union estimates that this vast tract of land, at present largely unused, is capable of feeding the nation from November until March.

An official of the State Agricultural Department of Arkansas is authority for the statement that on one plantation of 23,000 acres—the Banks & Danner plantation—there were, under the cotton restriction program, 3,338 acres planted to other crops. These acres were planted to clover, wheat, oats, soy-beans, alfalfa and corn.

There are 600 tenant families to be supplied with food and feed crops for 500 mules and 250 hogs. 4,800 acres will be planted to cotton.

The plantation received a check last year for \$84,000 for cotton destroyed in 1933.

PRICE FIXING under codes reduces salesmanship to a narrower field when the competitive industries are engaged in the same line of endeavor with products virtually equal. Quality is being stressed as the proper objective of the purchasing agent, but in certain lines of goods, where there is very little if any difference of quality or method of manufacture, advertising and salesmanship must take on new lines of thought. It may lead to research for improvements on the part of more progressive concerns and if this takes the form at the same time of economy in production where an open price policy is followed, it should lead to the posting of lower figures. In any event, salesmanship is being put upon its mettle.

The Government will have to spend money faster than ever before in peace time, according to the United Press, in the next thirteen months if all that the President asked for in his last budget message is to be used. The total is \$10,000,000,000. This is summed up as follows:

 Cost of running Government
 \$2,500,000,000

 Agricultural Adjustment Administration
 1,200,000,000

 Emergency (RFC, CWA, TVA, FCA, etc.)
 4,300,000,000

 Unappropriated relief
 2,000,000,000

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A \$5,000,000 CORPORATION has been formed in Great Britain to erect and operate a chain of distillation plants to produce gasoline from coal, according to the Commerce Department. There will be 20 plants and it will take four months for the first one to be started.

The company back of it hopes to produce approximately 20,000 gallons of gasoline a day from coal and the experimental research work, where the process was effected, has been carried on with the result of turning out 1,000 gallons a day since last September.

The describe as "literally a desert." There has not been so disastrous a spring in 40 years and the great agricultural states are "dry as the Sahara." The effect of the dust storms, which brought clouds of dust as far East as Washington, are estimated to have carried off billions of pounds of top soil with planted grain, and it was calculated that as much as 12,000,000 pounds fell in Chicago. In many areas it will be impossible to raise crops of any kind this year and government relief is being sought.

The Pennsylvania Railroad reports a material mounting volume of traffic from the recent introduction of collection and delivery service for less than carload freight. As one result, more than \$400,000 in new business has been received. It was inaugurated in December and the tonnage for collection and delivery at the present time represents approximately 20 per cent of the total less than carload traffic moved by this road.

While described as being still in the experimental stage, the results obtained indicate the need and demand for such a service, which has apparently unlimited possibilities.

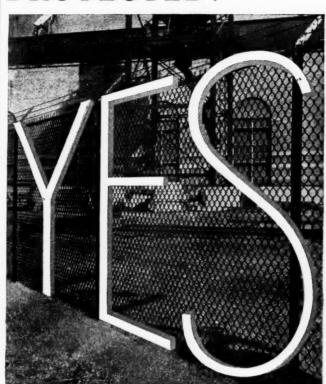
The National Association of Mutual Savings Banks had a very interesting annual conference last month. The president, Philip A. Benson, in calling the meeting to order declared "we still believe that the least government is the best government."

Attention was called to the huge figures indicating the business done by mutual savings banks—\$9,500,000,000 of deposits owned by 13,500,000 individuals with separate accounts.

In the course of his remarks referring to government measures for recovery, he said—"I am inclined to believe that some measures proposed would have been harmful if enacted. Others that have been enacted should be modified. Regulation of normal business activities, including matters within the scope of private management, enforced disclosure of information and matters of like purport, are socialistic in trend and will be harmful in effect.

"What should be the answer of those who own these accounts to the blatant demagogy of those who speak of destroying capital and transferring wealth from those who own it to those whom they vaguely call the debtors? * * * Thrift, the creation of wealth, its ownership, in fact all of the social and economic progress of the nation, have been upbuilt under the protection of the Federal Constitution."

PROTECTED?



by Cyclone

MADE SAFE by the company which has for forty-seven years been first with practically every improvement in Chain Link Construction. SURROUNDED by Cyclone Chain Link Fence, every part of which is controlled from ore to finished product by this one company. PROTECTED by the factory which has developed a super service in advising on any kind of fence problem and throughout these forty-seven years has worked on a guarantee of customer satisfaction.

But aside from these features which have given it leadership, Cyclone Fence provides protection at a surprisingly low cost per year. A cost which is very low compared with the cost of a robbery, a fire started by some vagrant, loss of time through unwelcome visitors, waste of property through pilfering, damage due to riots or strikes, or loss of cash which may go into one damage suit if an outsider is injured on your grounds.

Your property needs Cyclone Fence protection. An accurate estimate will be furnished without obligation. Address Dept. MR.

CYCLONE FENCE COMPANY

General Offices: Waukegan, Ill.

Branches in Principal Cities

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

Pacific Coast Division:
Standard Fence Company, Oakland, Calif.

Cyclone—not a "type" of fence—but fence made exclusively by Cyclone Fence Company and identified by this trademark.





ARE YOU AWARE THAT-

OWNERSHIP of the Iron and Steel approximately 4,500,000, or about 13 divided among some 500,000 stockholders. During the past 12 years the average profit realized on the net investment of the companies was 4.3 1931, and only two in 1932.

P. W. A. aggregate more than \$4,000,-000,000. About o ne-fourth of these projects are said to be of a meritoriif funds were available.

MEMBERSHIP OF TRADE UNIONS excess of \$85,000. averaged about 2,000,000 between 1905 and 1910, or about 6 per cent of the total number of workers. It reached controls 1,944,415 bales of cotton. In its highest point in 1920 with over 5,000,000, or 15 per cent of total workers. It dropped to an average of about 4,000,000 between 1922 and 1931, or 12 percent, reached the low point of about 2.500,000 in 1932 and is now

Industry of the United States is per cent of all persons gainfully employed.

STRUCTURAL CLAY PRODUCTS output in the South for the first quarter per cent. Only seven of 20 leading of this year was valued in excess of companies showed net earnings in \$1,100,000. During this period there were produced by 123 plants in the South 53.751.000 common brick valued PENDING APPLICATIONS in the at \$571,000; 79 plants produced 7,563,-000 face brick valued at \$109,000, and 25 plants produced more than 1,650,-000 vitrified paving brick valued at ous character and would be approved over \$36,000. Approximately 55 Southern plants produced more than 15,000 tons of hollow building tile valued in

> THE COTTON COMMODITY POOL addition the Secretary of Agriculture has 8,845 bales of actual cotton and 54,300 bales of cotton futures contracts. Directly and indirectly, the Government advanced loans of 10 cents a pound on approximately 1,490,000 bales.

FEDERAL POWER PROJECTS now under way are estimated to call for a total expenditure of \$196,200,000 to be paid for either out of PWA funds or by further Congressional authorization. PWA allotments for generating and distributing plants now total \$128,860. 000, with \$104,160,000 to be spent by the Federal Government, and \$24,700. 000 allotted to 50 non-Federal projects.

SEVEN-TENTHS OF THE AUTO. MOBILES in the United States are ready for replacement. Of the 20,500,-000 passenger automobiles registered. 8,000,000 cars are seven years old. 5,000,000 are eight years old, and 1,500,-000 are over ten years old.

THE SOUTH PRODUCED crops valued at more than 43 per cent of the country's total on 34 per cent of the country's crop area harvested last year.

HOMESTEADS VALUED up to \$3,000 are exempted from State taxes in Texas under a recent amendment to its constitution. On the total assessed property valuation of \$3,764,139,512 in 1933, this exemption amounted to \$566,-022,061, leaving \$3,198,117,451 for State taxing purposes. The exemption does not apply to county and local taxes,

(Continued on page 42)



The Level Here

Controlled From Here

The EC&M System of Automatic Pump Control is of extreme importance to the engineer or water works official in the solution of pumping problems involving close regulation of tank-levels or pressures. Through the use of this ultra-sensitive and accurate control, one or more pumps can be automatically started and stopped so as to maintain levels or pressures within extremely close range of the maximum working valve of a system. As illustrated above, it is not necessary to run pilot lines or control wires from the tank to the pump house. Let us send you complete information.

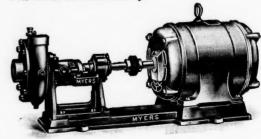
THE ELECTRIC CONTROLLER AND MFG. CO. 2700 East 79th St., Cleveland, Ohio. Gentlemen:

Please send me Bulletin 1100-A describing EC&M Automatic Pump Control for use with......Volts (a.c. or d.c.) motors. Name Company

OUTSTANDING PERFORMANCE!

Again Myers engineers have triumphed in the development and introduction of Myers Centridevelopment and introduction of Myers Centifugal Pumps. Precision, balance and smoothness of operation are matters of record. High efficiency and absolute dependability are thoroughly established. Performance has been outstanding. Users everywhere report complete satisfaction. This briefly, is the answer to the success of Myers Centrifugal Pumps and their rapid acceptance by industry and agriculture the rapid acceptance by industry and agriculture the country over.

Our new Centrifugal Pump Catalog, No. CT34, is complete with illustrations and descriptions of the different styles and sizes in which Myers Centrifugal Pumps are now built. If you have not received a copy and desire detailed information write us immediately.



THE F.E.MYERS & BRO.50. ashland, ohio.

impact strength DOUBLED



A patented improved process of centrifugal casting endows Super-de Lavaud pipe with physical characteristics which make this new pipe radically different from de Lavaud pipe as previously produced. There has been a fundamental metallurgical change in the metal structure. This new pipe is shatter-proofed to the extent that impact-resistance has been increased more than 100 per cent. When tested to destruction by hydrostatic pressure it does not shatter. It is a tougher, more ductile pipe capable of greater deformation without breakage. The factor of protection against handling hazards from plant to underground has been doubled. Send for descriptive booklet.

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OR

UNITED STATES PIPE AND FOUNDRY CO. BURLINGTON, N. J.

Foundries and Sales Offices throughout the United States

Two years ago our research and tech-nical staffs found a way to accomplish the "impossible." Super-de Lavaud Pipe is cast without chill in a metal mold. The product of this revolutionary process is an un-chilled gray iron casting with extraordinary impact-resistance. The resultant metal structure fractures non-directionally counteracting fragmentation and per-mitsanewannealing technique still further increasing impact - resistance.



U.S. SUPER-DE LAVAUD PIRE

JUNE NINETEEN THIRTY-FOUR

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Are You Aware That -

(Continued from page 40)

THE SOUTH LEADS all other sections of the United States in area of commercial forest land, with 191,000,000 acres or 39 per cent of the total for the country. It has about 200,000,000,000 board feet in merchantable saw timber, 12 per cent of the nation's total, exceeding all other regions except the Pacific Coast.

RUBBER can be made from guayule, golden rod and certain other plants in the United States. A tariff of 20 cents a pound on rubber would make it possible to supply the country's rubber requirements and create employment for thousands of American workers.

IRON AND STEEL used in the average automobile produced in 1932 represented 78 per cent of the weight of the car and only \$31.40 or 4.6 per cent of the retail price.

AMERICAN FARMERS will receive at least \$1,000,000,000 in benefit payments through the AAA this year. Cotton farmers will receive in loans and options about \$283,000,000; corn farmers in excess of \$100,000,000;

wheat \$150,000,000; corn-hog \$367,000,000; tobacco about \$35,000,000, and the balance will include other "basic commodities," including peanuts. Division of these governmental expenditures geographically shows the South will receive about \$350,000,000, the Middle West \$640,000,000 and the Eastern States about \$40,000,000.

WAGE INCREASES in the Steel Industry since April 1 added \$3,000,000 monthly to the industry's payroll. Hourly rates are 36 per cent higher than in June, 1933. The wage level is 6 to 7 per cent higher than in the peak period of 1929, although prices are below the post-war high.

THE CHILD LABOR AMENDMENT to the Constitution was ratified in five States last December. Since January, eight States have voted against ratification. Under the NRA codes now in force child labor has been banned.

GROWING OF CROPS deprives the land annually of 4,000,000 tons of nitrogen, 1,500,000 tons of phosphoric acid, and 2,300,000 tons of potash. Of these removals, we restore annually only about 350,000 tons of nitrogen, 800,000 tons of phosphoric acid, and 370,000 tons of potash.

ADMINISTRATION THE FARM started the second year with about 3,000,000 farmers enrolled in production control plans. Marketing agreements and licensing cover 80,000 dairy farmers, 10,800 rice growers and 740,000 growers of other special crops not classified as basic commodities such as wheat, cotton, tobacco, and corn and hogs. Nearly 36,000,000 acres of productive land have been withdrawn under contract in the effort to solve the problem of surplus farm commodities. The area in principal crops harvested last year was 322,464,000

RAW COTTON EXPORTS for the first quarter of this year amounted to 1,917,913 bales valued at \$112,585,806. During the same period exports of cotton manufacturers were valued at \$11,256,703 including 60,053,294 square yards of cotton cloth valued at \$6,402,-277, the balance being in yarn, thread and cotton hosiery.

DAIRYING is a billion dollar industry, ranking among the largest in the country. Per capita consumption of milk in the United States is less than one pint a day. It is estimated that 7,000,000 undernourished children need more milk.

\cdot C O L E \cdot



One of Country's Largest and Highest Water Tank and Tower

This million gallon COLE water tank and tower, the last unit in an enlarged water supply system for Gastonia, N. C., is 56 ft. in diameter and a full hemispherical bottom gives a total depth of 62 ft.

The supporting tower is composed of 16 columns and the distance from the base to top of tank proper is 200 ft.

Particular attention was paid to developing an attractive as well as a substantial structure.

Put YOUR problem up to OUR Engineering Department.

R. D. COLE MANUFACTURING CO.

Established 1854

NEWNAN, GA.

New York Office, 5 Beekman St.

SDUTHLAND PRODUCTS -WELDED OR RIVETED-



We now manufacture and offer to the trade tanks in all sizes for pressure or gravity work. Also other steel equipment of either

WELDED OR RIVETED CONSTRUCTION

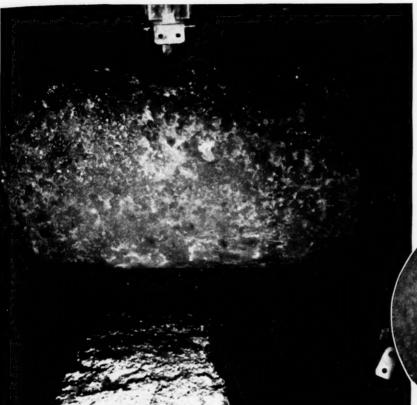
This applies to field as well as shop built equipment.

Write us for information and quotations.

CHATTANOOGA BOILER & TANK CO. CHATTANOOGA, TENN.



270 years old—and still



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in service

Below is shown a section of the world's oldest cast iron water main at Versailles, France, bearing the initials of the great "Sun King"—Louis of France. At left is shown section of main in underground gallery (object at top is part of photographer's lighting equipment).



THE oldest cast iron water mains in the world, by authenticated records, supply the town and the parks of Versailles, France. They were installed in 1664 by order of Louis XIV and are still functioning after 270 years of continuous service. The first photographs of these oldest existing cast iron mains in service underground were recently made for The Cast Iron Pipe Research Association, one of which is reproduced above without retouching. The insert photograph shows a section of the pipe in which is cast the initials of the "Sun King"—Louis of France.

Cast iron mains still in use after serving 100 to 200 years, and longer, have been recently uncovered and inspected in England, France,

Germany and the United States. Taxpayers have saved and are saving enormous sums in taxes or rates by reason of the long life and low maintenance cost of cast iron underground mains

The reason for the long life of cast iron pipers is its effective resistance to rust. Cast iron is the one ferrous metal for water and gas mains, and for sewer construction, that will not disintegrate from rust. This characteristic makes cast iron pipe the most practicable for underground mains since rust will not destroy it.

For further information, address The Cast Iron Pipe Research Association, Thomas F. Wolfe, Research Engineer, 309 Peoples Gas Building, Chicago, Illinois.

Methods of evaluating bids now in use by engineers rate the life of cast iron pipe at 100 years minimum

CAST IRON PIPE

Look for this



trade-mark

JUNE NINETEEN THIRTY-FOUR

43

INDUSTRIAL NEWS



Carroll B. Huntress, who has been serving as executive secretary of the National Coal Association, has been elected president of Appalachian Coals, Inc., Cincinnati, Ohio, effective May 1. Mr. Huntress succeeds James D. Francis, who has been vice-president of the Island Creek Coal Company and now has been elected president of that company.

Road Machinery Companies Merge

Consolidation of the Western Wheeled Scraper Company, Aurora, Ill., and the Austin Manufacturing Company, Chicago and Harvey, Ill., effective July 1, involves two of the oldest and best known manufacturing companies in the United States. The consolidated company will operate under the name of Western-Austin Manufacturing Company, with general office at Aurora. The Austin-Western Road Machinery Company, Chicago, will continue to handle the sales of the Western-Austin Manufacturing Company.

Chain Belt Re-opens Houston Office

The Chain Belt Company, Milwaukee, Wis., manufacturers of chains for oil fields and other industrial uses, together with a complete line of construction, sanitation, transmission, conveying and material handling equipment, announces the re-opening of its Houston (Texas) office under the direction of J. W. Snavely. The office will be located at 3118 Harrisburg boulevard, the Company also has stocked its REX line of all types of roller chains, sprockets, buckets, pillow blocks, etc., in its Detroit Warehouse and to better serve the territory, the Detroit office in charge of C. E. Martin has been moved to 5169 Martin Avenue, adjacent to the warehouse.

G-E Contracts Corporation Offices

The local office in the Martin Brown Building, Louisville, Ky., of General Electric Contracts Corporation, has been enlarged and made a district office, with S. W. Dail, formerly local manager, serving as district manager. Another new district office has been established at Fifth and Figueroa streets, Los Angeles, Cal., with R.E. Boian, as acting manager.

Enduro Stainless Steel, Toncan Iron

Railey & Milam, Inc., 27-39 W. Flagler street. Miami, Fla., have been appointed distributors of Enduro Stainless Steel and Toncan Iron by the Republic Steel Corporation, Youngstown, Ohio, producers of these products.

Commonwealth And Southern Vice-President

Directors of the Commonwealth and Southern Corporation, New York City, have elected William H. Barthold a vice-president and director. Mr. Barthold has been connected with western operating units of The Commonwealth and Southern System and predecessor companies for more than thirty years, and is now chairman of the board of Central Illinois Light Company, president of Southern Indiana Gas and Electric Company, vice-president of Consumers Power Company and an officer and director in other companies.

Largest and Smallest Tires Made Same Day

The largest tire and smallest tire ever produced by the Firestone Tire and Rubber Company, of Akron, Ohio, were recently turned out from the company's production lines on the same day. The former, with a 10-inch rim diameter and 20-inch cross section, is 16-ply and operates at 45 pounds air pressure. It is designed for trailers on large excavation and construction projects. A trailer equipped with eight of these tires will be capable of carrying a 60-ton load

over soft or sandy ground. The smallest commercial tire made by the company is a tailskid tire 10½ inches high, designed for Government airplanes.

District Sales Representative

A. F. King, formerly with the Buffalo and Philadelphia district sales offices of the Reading Iron Company, Philadelphia, Pa., has been transferred to Boston, Mass., as District Sales Representative. He succeeds John G. Ross, resigned.

Industrial Dial Scales.—Condensed Catalog No. 7 has been issued by The Kron Co., Bridgeport, Conn., describing the company's line of industrial dial scales and illustrating various models.

(Continued on page 46)

Brown & Co., Inc. REALTORS Chattanooga, Tenn.

The eyes of the Country are now centered on Chattanooga and the Tennessee River Valley. We have for sale or rent, manufacturing sites, retail or warehouse sites, in fact land for any purpose. For further information write Brown & Co., Inc., 736 Cherry St., Chattanooga, Tenn.

Looking Florida-ward

Thousands are looking towards Florida because, in the words of the late Richard H. Edmonds, "they realize that Florida possesses a variety of resources which make possible the widest and most profitable diversity of agriculture and manufactures."

Those contemplating a change of location should by all means make a personal study of Florida.

For literature of the East Coast of Florida—write—

Model Land Company

Flagler System

St. Augustine, Florida

smallest pany is a igned for

e Buffalo es of the bhia, Pa., Mass., as succeeds

l Catalog Kron Co., ompany's ustrating

enn.



Consult with your local

APPROVED ROOFER

When you buy a roof, reputations and service records alone can tell you what you want to know.

Around the unmatched reputation of Barrett Roofs for fire-safety, weather-safety and repair-free economy, the unique, country-wide organization of Barrett Approved Roofers has been built. These men have been selected on the basis of their experience, ability and integrity. They are attracted to Barrett by their knowledge of Barrett performance and the acceptability of Barrett Roofs.

When you have a Barrett Roof applied by a Barrett Roofer you are assured first-quality materials, correct application and workmanship, upon which Barrett and the roofer will stake their reputations.

We will gladly send you the name and address of a Barrett Approved Roofer located near you. He merits your consideration on any roofing, reroofing or waterproofing project.

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JUNE NINETEEN THIRTY-FOUR

45



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Your local Barrett Roofer or Distributor can give you expert advice on the condition of the roof of your home. If it needs reroofing he can show you a variety of roofing materials scientifically manufactured to meet modern requirements. Though very moderate in cost, Barrett Mineral-Surfaced Shingles are weather-tight, fire-resistant, long-lived and beautiful in pattern and color. Write for the Barrett Shingle booklet.

FOR

Recent CHEMICAL Developments

IV

1. NEW PLASTIC

Although still in the laboratory, a new plastic has been developed to a point where it should prove of exceptional interest to users of cellulose acetate.

2. STANDARDIZED VARNISH ROSINS
The method employed in producing
Hercules Pale Wood Rosins allows chemical control and makes these products more
uniform than ordinary commercial rosins.
This uniformity enables varnish manufacturers to standardize their products more
accurately and to maintain better control
over quality.

3. ADVANCE IN PAPER CHEMICALS

The new dry wood rosin size marks a definite step forward in paper makers' chemicals. While possessing the obvious economical advantages of any dry size, it overcomes the disadvantages which have limited the use of other dry sizes.

4. DISTILLATION DIAGRAM

A diagram has just been issued which charts the process by which 23 of the more important Hercules Steam-distilled Naval Stores Products are produced. A limited number of charts are available upon request.

5. ADVANCE IN EXPLOSIVES

A combination in one explosive of the waterresistance, plasticity, high bulk-strength and good fumes possessed by gelatin dynamite, with the economy of explosives containing a high percentage of ammonium nitrate, was never successfully attained until the Gelamites were produced.

6. FIRE-RESISTANT COATING

Tornesit, the new chlorinated rubber, resin-like product, is non-flammable and stable up to 110°C. It is chemically inert, practically odorless, and has been stored in tin cans for sixteen months with no evidence of corrosion or gas pressure. It offers many attractive possibilities in the general field of protective coatings.

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Solvenol No. I consists chiefly of Dipentene, but contains also pinene, terpinene, terpinene, terpinene, terpinene, and traces of terpene alcohols. Its solvent power is appreciably greater than that of turpentine. It has many properties that recommend it for paint and varnish products.

8. ALCOHOL SOLUBLE NITROCOTTON

A special type of nitrocotton has recently been developed that is designed for high solubility in alcohol. It imparts desirable qualities when added to alcohol-soluble gums, and resins, and to shellac.

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INDUSTRIAL NEWS

(Continued from page 44)

Belt Conveyor Idlers.—The C. O. Bartlett & Snow Company, Cleveland, Ohio, designers and builders of material handling and processing equipment, have issued Bulletin No. 72 on Belt Conveyor Idlers, presenting a complete description of the most popular types of Bartlett-Snow Belt Idlers, with tables of dimensions, prices, engineering data, etc.

Super DeLavaud Cast Iron Pipe.—Presenting detailed data in a condensed form on what is described as an outstanding metallurgical discovery—casting pipe without chill in a metal mold—a new catalog has been issued on Super DeLavaud Cast Iron Pipe as manufactured by James B. Clow & Sons, Chicago, Ill., and National Cast Iron Pipe Company, Birmingham, Ala.

Littleford Highway Equipment.—Littleford Bros., Cincinnati, Ohio, manufacturers of road maintenance equipment, have issued Bulletin J-1 on oil burning maintenance kettles, wood burning maintenance kettles, asphalt tools and pouring pots, crack and joint fillers.

Western Road Machinery.—Late literature published by the Austin-Western Road Machinery Company, Chicago, includes Bulletin 34-B on the newly designed Western Primary Breaker, and Bulletin No. 1332, covering the complete line of Austin Dual and Single Drive Motor Graders and describing in detail distinctive features. Bulletin 34-C is devoted to Western Contractors Equipment.

Diesel Electric Locomotives.—THe Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., has issued catalog 1994, an 80-page publication, which tells about Westinghouse Diesel engines and 15 standard sizes of diesel electric locomotives. It also presents specifications, outline drawings, performance curves, comparative operating data, etc., with illustrations showing Westinghouse locomotives in service.

"Caterpillar" Elevating Grader. — The Caterpillar Tractor Company, Peoria, Ill., has issued a folder illustrating and describing the "Caterpillar" Power Take-Off Elevating Grader—the power of the tractor pulling the machine, driving the carrier and operating every working adjustment of plow and carrier.

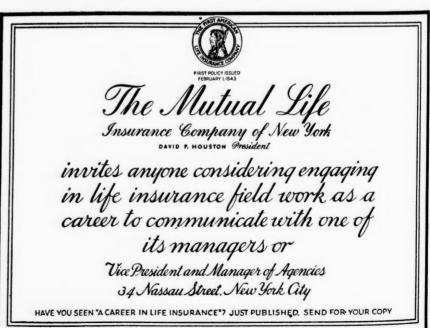
Bailey Boiler Meters.—The Bailey Meter Company, Cleveland, Ohio, has issued Bulletin No. 43-A, describing the "Savings Effected by Bailey Boiler Meters" in more than 20 typical installations.

Firing of Boilers. — Link-Belt Company, Chicago, has issued an interesting book "Firing Method Modernized For Profit," giving a comparison of hand firing and controlled automatic underfeed firing of boilers from 10 to 250 B. H. P. It illustrates in graphic and pictorial form such features as smoke elimination, uniform temperatures and pressures, coal savings, firing efficiency, etc.

ENDURO 18-8 Stainless Steel.—The Republic Steel Corporation, Central Alloy Division, Massillon, Ohio, has released a 16-page brochure devoted to ENDURO 18-8 Stainless Steel, which presents the latest data on that product and several of the more important variations which make up the ENDURO 18-8 series of types, including ENDURO 18-8-S, 18-8-STI, 18-8-SMO and 18-8-FM.

Lava and Alsimag Ceramics.—The American Laval Corporation, Chattanooga, Tenn, is distributing a new catalogue, Bulletin No. 34, illustrating and describing Lava and Alsimag made-to-order ceramic parts for various industries, including the fields of electrical appliance, radio, aviation, automotive, gas, oil, chemical and textile.

Deming Pumps, Water Systems, Etc.—New Catalog No. 30, of the Deming Company, Salem, Ohio, contains 160 pages of subject matter liberally illustrated with larger photographs and drawings of Deming pumps, water systems and auxiliary parts and equipment.



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Illustration shows large steel Wharf Boat recently constructed by Ingalls for the Port of Greenville, Miss. The hull is 230' long, 55' beam and 10' deep, welded solidly throughout using no rivets whatever. The vessel is mounted with a transit shed 48' x 200', provided with grain handling equipment and hoisting rigs for operation of an up-to-date river terminal.

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JUNE NINETEEN THIRTY-FOUR



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GULF STATES STEEL COMPANY

BIRMINGHAM, ALABAMA

« « LETTERS

FROM READERS » »

More Impracticable

THE GEOMETRIC TOOL COMPANY Machinery and Tools New Haven, Conn.

EDITOR MANUFACTURERS RECORD:

I thoroughly agree with you that it is time for America to express itself thoughtfully and fearlessly on the philo ophy of the "New Deal." It is also none too early for American business to begin to think about what must be done with NIRA. Personally, I doubt if it can possibly be entirely abandoned. To do so, would be politically impossible unless on its expiry date unemployment no longer exists and a shortage of labor is being generally felt, which few people believe will be the case. On the other hand, to continue NIRA in its present form will, as business gradually returns to normal, become more and more impossible and impracticable.

JAMES W. HOOK. President.

Disturbing Factors in Industrial Recovery

HARDIE-TYNES MFG. Co. Engine Builders Compressors. Hoists. Heavy Castings, hydraulic and special machinery Birmingham, Ala.

Editor MANUFACTURERS RECORD:

The unsettled conditions, particularly the strikes and tentative strikes, are tending to stop the purchasing by the larger corporations and also the smaller ones. In addition to this, the workmen themselves are probably not producing as efficiently as they would if it was not for the fact that their mind is disturbed with conflicting reports. The efforts of the American Federation of Labor to organize the country undoubtedly is leading to the distortion of lots of the news of the day and the true picture is not being presented to the workmen.

Things would be dull indeed if it were not for some Government contracts. Costs of production is increasing rapidly and prices are not keeping pace so the spread as between cost and selling price is becoming less all the time, which has the effect of eliminating profits and possibly causing serious losses in some industries.

If the labor problem could be settled

NIRA in Present Form Becomes in some such manner as to get the mind of the workmen on the job of producing effectively, it would be a very big forward step.

> The South is gravely concerned over the efforts on part of some of the NRA, our Northern competitors and labor to eliminate Southern wage differentials. even those existing under approved codes. Some of these questions were discussed at the Atlanta meeting of the Southern States Industrial Council which was largely attended by leading industrialists throughout the South.

> > R. C. STOBERT Vice President and General Manager

Safeguard Industry's Rights

NEW RIVER COAL OPERATORS ASSOCIATION Mount Hope, W. Va.

EDITOR MANUFACTURERS RECORD:

Your editorial on the cover page of your May issue is very fitting. We are, without doubt, at a very critical stage of the game where, unless industrial enterprises are careful as to their movements, we may find ourselves in a lessening of buying power rather than an increase. In fact, that situation is already becoming noticeable.

The imposition of such legislation as the Wagner bill and the proposed 30hour Connery bill most certainly takes from industry its inherent right. It breaks down the sovereign State and instead of a recovery measure the legislative enactment would degenerate recovery into reform, and reforms are always destructive in their wake, when such reforms imperil the tremendous investment of business enterprises. We must be careful that the New Deal which may be the outgrowth of the present situation shall not imperil the future of industry.

> S. C. HIGGINS. Secretary-Traffic Manager.

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LOUISIANA CENTRAL LUMBER CO. Manufacturers of Yellow Pine Lumber (Annual Capacity 100,000,000 feet) Clarks, La.

EDITOR MANUFACTURERS RECORD:

I have read the article on the front cover of the May issue of the MANU-FACTURERS RECORD entitled "Reform vs. Recovery" with a great deal of interest. It is thoroughly sound and timely.

C. C. SHEPPARD, President and General Manager.

"Enough Experiments"

FARRELL-BIRMINGHAM COMPANY, INC. Chilled Rolls and Heavy Machinery Ansonia, Conn.

EDITOR MANUFACTURERS RECORD:

I read with interest the May issue of the Manufacturers Record and want to congratulate you on the remarks appearing on the front cover and the articles contained within the magazine. I am heartily in sympathy with your editorial "Enough Experiments."

Material of the type that you are giving to your readers will be helpful in arousing manufacturers to an expression of their demands for those things essential for reemployment and recovery. Only through aroused public opinion and the united efforts of those engaged in industry can we hope to offset many half-baked theories inimical to industrial progress.

> F. R. HOADLEY. Vice-President.

Revival of Durable Goods Industries Essential

LINK-BELT COMPANY Chicago

EDITOR MANUFACTURERS RECORD:

The May issue of Manufacturers RECORD has been received, and I have looked at it with great interest.

My own thoughts concur so exactly with the recent publications of the Durable Goods Industries Committee, that I would refer you to these documents, which doubtless are already before you. It is my hope that you and other publishers will give these thoughts due publicity.

GEORGE P. TORRENCE,

Re-employment has been blocked in the durable goods industries by the drying up of the flow of capital into new business, intensified by restrictive laws, by the limitation of plant capacity under some codes and by radical labor's demands seeking to control industry. The capital or durable goods industries in normal times employ more than 50 per cent of all labor engaged in manufacturing in this country. Since the depression only 4 per cent of new capital has been secured for the making of durable goods while in Great Britain new capital for the same industries has risen to 54 per cent .- Editor, Manufacturers Rec-

Southern Sales Offices, Charlotte, N. C.

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JUNE NINETEEN THIRTY-FOUR



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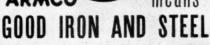
THE AMERICAN ROLLING MILL COMPANY

Executive Offices:

Middletown, Ohio



means



Dangers Confronting America

(Continued from page 18)

system of freedom of individual initiative and partially under a system of increasing government control. One must necessarily destroy the other. It is impossible that Industry shall, through work and enterprise and faith in the future pull the country out of a depression at a time when the government is constantly increasing its control of that Industry, and lessening its opportunities. The system which has obtained in America since the coming of the first white settler has been based on the theory that the individual had an inalienable right to work, to engage in business, and to conduct that business as he saw fit, as long as he obeyed the laws which applied to everyone alike. The New Deal philosophy brings forth the cencept that a man's right to work is not inherent, but comes from the government, and therefore may be limited to thirty hours, or forty hours, or any other period it dictates; that a man's right to engage in business is not an inherent right, but is a prerogative of the State, which the individual can enjoy under such rules and regulations as the government from time to time prescribes, even as in the days of Queen Elizabeth the right to trade came only with the granting of a Charter.

It is time for businessmen to give sober, careful thought to this situation: cion. to realize that time spent in buying and selling, and managing one's business, is a futile effort, in the face of these conditions. Economic conditions have been routed by political expedience. Business conditions such as we have known cannot and will not come back until present political trends are changed. Business must realize that the coming Congressional elections offer the last hope of its revival.

I am not talking in terms of partisan politics. There has been a splendid minority in both parties which has consistently and courageously stood for the maintenance of old-fashioned American principles. The Honorable Carter Class, for years standing high in the councils of the Democratic Party, has presented an inspiring example of statesmanship of the highest order in refusing to desert sound principles for party expediency. Industry must demand that in this coming election those who aspire to represent it, irrespective of the party label under which they run, must declare themselves in unmistakable terms as to whether they stand upon, and will vote in accordance with, those fundamental principles which have been the

basis of American life for the last one vidual rights, and is itself obligated to hundred and fifty years. Either the the individual. American people must repudiate State Socialism, or else accept its consequences, and they should make their decision openly, intelligently, and with a full understanding of what they are doing. Until this decision is openly and definitely made, and unless it is properly made, there is no sound reason to expect permanent improvement, or a real emergence from the depression.

Economics vs. The New Deal

(Continued from page 20)

an attempt to disregard economic law,to "create" demand, to control supply, to fix prices. Regardless of environmental limitations or human weaknesses, some egotist wishes a "plan," according to his ideal of "social justice." He proceeds to force it upon others. It may work, and it may not-what difference we are experimenting!

I say that when a "plan" breaks down into a series of experiments, it is not a plan. I say that no "experiment" is wise which is not based on experience.

Real planning is desirable. We need much of it. But we must know that it must be done by individuals for individuals. It must be evolutionary, not revolutionary. It must be devised by experts, in the light of experience; and be carried out by education, not coer-

Emergency Angle

The New Deal was begotten to "do something" quick. So it is ever "doing something"-now for farmers, now for organized labor, now for silver mine owners-and other "forgotten men." But constantly doing something means doing anything! The formula is: Emergencydo something-new emergency-do something—an endless chain—a perpetual emergency. So we are always "on the way!"

Return to Basic Principles

There are some suggestions concerning the philosophy and economics which should be adopted by any political party in opposition to the New Deal.

The root idea must be a true and realistic concept of the individual-the per-Neither the rights of the individual, nor his obligations, can be forgot-Individuals must live together under government, and government thus becomes a symbol of mutual rights and obligations. But government is not a mere indication of individual obligations, or of limitation on individual rights. It is also the guarantor of indinew or old, can long prevail.

"Equal opportunity" must be made a reality, not a mere slogan, and be given a positive significance. This can be done, not by merely talking of freedom from restraint, or by passing laws against restraint of trade. It must be done by educating individuals in ways which will increase their capacities to use opportunities, and by affording practical opportunities for their development. Many individuals need help and guidance. Nor need these be given in any way which will regiment individuals or destroy their individualities. To make men understand their mutual relations and their common dependence upon their government, is worlds apart from collectivism.

Competition must be preserved and strengthened as a positive force. This cannot be done by prohibitions merely against monopoly. Individuals must be helped to compete (not to avoid competition). Fair rules must be established for the competitive game. Government must be neither a policeman nor a dictator. It must give information, advice, and leadership.

A new attitude is thus required as regards tariffs, trusts, and labor unions.

Along with this, economic law must be recognized as real, and as supplying guiding principles, insofar as economic life is concerned. The costs must be counted. Notions about "creating power", substantiating credit (debt) for capital, and lightening debt burdens by flat money, must be abandoned. The law of supply and demand must be understood. and policies be adjusted thereto. The advantages of freedom of exchange among men and nations must be real-

But the old political slogans will not do-whether Republican or Democratic. A mere "counter revolution", seeking to return to the old extreme of materialism and to the old negative individualism which can be enjoyed only by a few, is foredoomed. The new party must stand neither for "stand-pat" reaction nor for a New Deal. It must stand for a square deal, based on a true social philosophy and a true Economics.

To this end, I think, the first step should be a great reformation in the tests and methods used in selecting political leaders, and government representatives or executives. The idea of a positive and constructive competition must be applied first to the selection of government officials themselves. Unless and until there is adopted some basis of choice which insures both integrity and intelligence in the successful candidates, and some test of tenure which insures both honesty and efficiency among legislators and executives, no "Deal",

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Inflation in France

(Continued from page 21)

cept printing-press money at its face value, provided that all paper, whether mandats or assignats, might pass at its real value and that contracts could be made in any currency selected by the parties; a doctrine, it may be noted, adopted by the Supreme Court of the United States, in 1868, and still prevailing unless discarded by the 1933 repudiation.-See Bronson v. Rodes, 7 Wall., 229. Then, in February, 1797, the machinery for producing mandats was destroyed, as had shortly before been that for printing the assignats and, within three months, the 21,000,000,000 livres of assignats still remaining in circulation were made valueless by law. It was then provided that two-thirds of the National debt should be paid in bonds, which the creditors were forced to accept, and that the remaining onethird should be entered upon a ledger and paid at the pleasure of the Government. These bonds speedily fell as the printing-press money had fallen and France was substantially without money and without credit until the accession of Napoleon, in 1799, as First Consul.

Results of Inflation

The condition of France during this period was deplorable. Trade, commerce and manufacturing almost ceased. The late Andrew D. White, president of Cornell University, writing of this period, said:

... All this breaking down of the manufactures and commerce of the nation made fearful inroads on the greater fortunes; but upon the lesser. and upon the little properties of the masses of the nation who relied upon their labor, it pressed with intense severity. The capitalist could put his surplus paper money into the govern-ment lands and await results; but the men who needed their money from day to day suffered the worst of the misery . . . There had come a complete uncertainty as to the future. Long before the close of 1791 no one There had come a comknew whether a piece of paper money representing a hundred livres would a month later, have a purchasing power of ninety or eighty or sixty livres. The result was that capitalists embark their means in feared to business. Enterprise received a mortal blow. Demand for labor was still further diminished; and here came a new cause of calamity; for this un-certainty withered all far-reaching undertakings. The business of France dwindled into a mere living from hand to mouth . . .

"... Nor was there any compensating advantage to the mercantile classes. The merchant was forced to add to his ordinary profit a sum sufficient to cover probable or possible fluctuations in value, and while prices of products thus went higher, the wages of labor, owing to the number of workmen who were thrown out of employment, went lower.

"But these evils, though great, were small compared to those far more deep-seated signs of disease which now showed themselves throughout the country. One of these was the obliteration of thrift from the minds of the French people. . . . the ordinary motives for saving and care diminished, and a loose luxury spread throughout the country. A still worse outgrowth was the increase of speculation and gambling. . . . in the country at large there grew a dislike of steady labor and a contempt for moderate gains and simple living."

Price Fixing Failed

Monetary confusion during the French revolution developed inevitably into arbitrary price determination. The socalled "Law of the Maximum," advocated by Robespierre and St. Just, was adopted on September 29, 1793. It fixed the prices of articles of necessities at one-third above their prices in 1790, plus transportation at a fixed rate proportioned to distance, five per cent for wholesalers' profits and ten per cent for retailers' profits. Not even the guillotine could enforce these prices. Products of the farms and factories, so far as the latter were operated at all, were withheld from market; scarcity increased: supplies were rationed: dealers retired from business and, in spite of penalties, forfeitures and executions, the attempt at price regulation lasted scarcely more than a year. Before defeat was acknowledged, however, the Convention provided, in May, 1794, that the death penalty should be inflicted upon any person convicted of "having asked, before a bargain was concluded, in what money payment was to be made."

Many authors have undertaken to trace the progress of prices during this period. In their equivalents in American dollars, of the period before the 1933 debasement of United States coinage, a pound of bread sold for \$9; a bushel of potatoes for \$40; a pound of candles for \$40; a cartload of wood for \$250; a bushel of flour for \$45; a pound of sugar for \$12.50; a pound of soap for \$8; a cabbage for \$5.50; a pair of shoes for \$40 and twenty-five eggs for \$5.

Many believe that it is as difficult to abandon as it is unwise to enter upon a policy of inflation. Napoleon had greater vision. At the time of his accession the evils here briefly and insufficiently epitomized were at their worst. The treasury was empty, government debt was immense, collection of taxes seemed impossible, war was in progress on two frontiers and civil war in La Vendee. The army was unpaid and scarcely a day's expenses could be borrowed in any quarter. Yet Napoleon boldly declared "I will pay cash or pay nothing," and he paid cash. Promptly, he arranged the assessments, funded the

debt, made payments in cash and, from that day to Waterloo, France continued on a specie basis (with the exception of a few days suspension in 1807), and. during the whole period of almost continuous warfare, the nation suffered no severe financial distress. When the financial pressure was hardest and printing-press money was again proposed, Napoleon wrote to his Minister: "While I live, I will never resort to irredeemable paper." In truth, as John Sherman saw, and practiced, when the United States was confronted by greater difficulties than today. "The way to resume is to resume." Always and everywhere, the direct, courageous and honest route is the route to economic health and public welfare; forever, the route of timidity and dishonest repudiation is the route to confusion, destruction and despair.

Joseph J. Hock

In the death last month of Joseph J. Hock, president of the Arundel Corporation of Baltimore, the South and the country lost a citizen and a business executive who will be greatly missed.

The Arundel Sand and Gravel Co., from which came the present corporation with its widespread and important part in American development, was his idea. His background was years of experience in the construction industry. It often has been remarked that there is a romance connected with every great enterprise. Certainly there is an idealism that overcomes obstacles and constantly attempts what the cautious think impossible.

Joseph J. Hock deserved success. Indefatigable in his work, he was never satisfied with half-way attempts. Whatever was done must be with satisfaction to the customer and credit to Arundel. And sometimes, or so it seems to the layman, the risks involved in jobs of dredging and dams and fills that have made the enterprise known from one end of the country to the other must be tremendous.

But such men deny that there is risk. They estimate and proceed—always proceed. Wind and weather and the rush of water are merely challenges to determination that does not faiter.

The Red Network; by Elizabeth Dilling, published by the author, Kenilworth, Ill., and 53 West Jackson Boulevard, Chicago; price \$1.00.

This publication, described as "A Who' Who and Handbook of Radicalism for Patriots," contains a series of articles on communism, pacifism and organizations promoting them, and lists the reported connection of individuals with various organizations and movements of a radical nature, declared by the author to be inimical to the best interest of the country.

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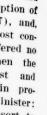
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Crescent Spinning Mills Relmont, N. Crescent Spinning Mills Betmont, N. C. select 130,000 square feet of RU-BER-OID "Lock-Down" Hex Strip Shingles to Protect the Homes of Their Employes.

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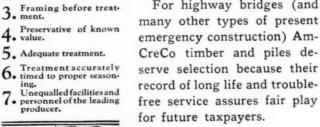


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The present generation of drivers wants-and is getting-a lot of highway construction, covered by emer-

gency financing. We cannot forget that the next generation will want-and ought to have-service from the improvements whose cost they must finish paying.

For highway bridges (and





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CEORGIA CREOSOTINO COMPANY

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UPELO, the chief city in Lee County in the northeastern section of Mississippi, has received nation-wide attention because it was the first community to contract for TVA power. Located in the center of a rich agricultural region, it has had a steady growth in manufacturing utilizing available raw materials for woodworking, textile, paper, ceramic, dairying and other enterprises.

It has an adequate water supply with special rates given to extra large industrial users of water. Transportation is furnished by two trunk lines: the St. Louis and San Francisco and Mobile and Ohio railroads. Two main highways intersect at Tupelo: U. S. Highway No. 45, the main thoroughfare between Chicago and the Gulf; U.S. Highway No. 78, an important traffic artery. Passenger service as well as public trucking service is available.

The Tupelo Chamber of Commerce, in citing the advantages that the city has to offer industry, calls attention to the benefits of liberal corporation laws. five-year exemption from State, county and municipal taxes, low cost coastruction, congenial climate and a rapidly in-

Tupelo Building for Future creasing consuming population. These, among other advantages, have enabled creasing consuming population. These, the city to make industrial progress, and with the securing of government power at low cost it is inviting the establishment of plants.

> Electric energy is available from the TVA distributed through the municipally owned system. The schedule of rates as given by the Chamber of Commerce is as follows:

Basic Industrial Rate-Demand Charge:

\$1.00 per kilowatt per month.

Demand—Maximum integrated thirty minute period.

Energy Charge

First 10,000 kwh. per month at 10 mills per kwh.

Next 25,000 kwh. per month at 6 mills

Next 65,000 kwh. per month at 4 mills per kwh.

Next 400,000 kwh. per month at 3 mills per kwh.

Over 500,000 kwh. per month at 2.5 mills per kwh.

Minimum Monthly Bill:

\$1.00 per kilowatt of maximum demand, but in no case shall the maximum demand for billing purposes be taken at less than 60 per cent of the maximum monthly demand billed during the preceding 12 consecutive months period.

Service taken under the Small Power Rate will be subjected to minimum bill prescribed for commercial customers.

Basic rate (including small power rate) subject to a surcharge, initially established by Municipality and modified from time to time as net revenues improve of 10

Surcharge to take the form of straight percentage added to customers bills.

Standard Residential Rate:

First 50 kwh. per month at 3c per kwh. Next 150 kwh. per month at 2c per kwh, Next 200 kwh, per month at 1c per kwh Over 400 kwh. per month at 4 mills per kwh.

Minimum Monthly Bill: 5 ampere meter—25 kwh. \$0.75. 15 ampere meter—33 1/3 kwh. 50 ampere meter-50 kwh. \$1.50.

Pittsburgh Plate Glass Company Stockholders

At the end of the first quarter of 1934, there were 5,081 stockholders of the Pittsburgh Plate Glass Company, 42 per cent of whom were women, or 2,122, owning 19 per cent of the total number of shares outstanding. Of the total number of stockholders, 45 per cent were men, who owned 25 per cent of the outstanding stock. Trust companies and estates own 49 per cent of the stock, the largest stockholding interest being the Pitcairn Company of Philadelphia, which owns approximately 331% per cent of the total number of shares outstanding. This company manages the affairs and investments of the late John Piteairn, formerly chairman of the board of Pittsburgh Plate Glass Company. total number of shares outstanding of the company is 2,172,516.

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Housing developments and groups of company houses may be quickly and cheaply renewed with Cabot's Creosote Shingle and Wood Stains. Low in first cost, easily and quickly applied, these Stains greatly improve appearance and the genuine Creosote progressing the progressing of the progressing statement of the progressing with the progressing statement of the progre

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MONEY-SAVING PIPE

Engineers and contrac-

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The contractor will save time and

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The property owner's interest will be served because of the extra tight, extra secure, extra durable job that results when NATIONAL Pipe is installed. Reputation, good will, and a profitable business may be expected to grow up where such

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5. Coils and bends well.

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6. Sound joints. 7. Available in copper-

steel.

8. Scale-free.

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10. Rigidly tested and inspected.

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Produced with unrivaled facil-

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of wrought pipe in the world.

Meets all standard specifications.

America's Standard Wrought Pipe

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Recognized everywhere as-

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OPPORTUNITIES IN THE SOUTHEAST

In regretfully being compelled to decline a request from George R. Hilty, general chairman, to address the Southeastern Advertising and Publicity Conference at Miami, Fla., May 28, the Editor of the Manufacturers Record replied as follows:

THERE probably never has been a time in the history of Southern development when the South could, with equal assurance and certainty of results, place before America and the world its outstanding opportunities.

In the Southeastern States particularly, these opportunities, based on the vast resources developed and undeveloped, are awaiting men of vision and initiative to turn them into accomplishments.

Under the general geographical designation of the Southeast, may properly be included the eleven States from Maryland to Mississippi. They have unmatched natural advantages of mild climate and adequate rainfall, fertile soil, abundant forests of hard and soft wood timber, and great mineral deposits. These States are strategically located between the great consuming markets of the North and West, and the growing markets in the Latin American countries to the South. Adequate port facilities joined by rail lines to all the great distributing centers of the country afford a connecting link to South America and Europe. With an established Pan-American air service the Southeast offers quick transportation and communication as an incentive to closer trade relationships leading to greater business development with Central and South America.

Within the Southeast reside 25,000,000 people. Aside from their agricultural productive capacity of more than \$1,600,000,000 under depression prices, including cotton and principal food and feed crops of the nation, they have produced manufactured goods valued at from \$4,600,000,000 in depression times to more than \$7,000,000,000 in boom years.

These industries of the Southeast, utilizing farm and forest raw materials, minerals and clays so abundant in this section, offer a great variety of output and are capable of further expansion to meet the needs of potential markets in other sections of the United States and in foreign countries.

Within the Southeast are some of the largest plants of their kind in the United States and the world.

Within this area is one of the world's greatest clay belts for supplying refractory products of every description.

Within this area are coal and iron deposits, limestone, bauxite, phosphate rock, feldspar, and many other minerals that have been developed and are available for further development affording an opportunity for increasing the wealth of the South and the nation.

Within this area are vast forest resources which are just becoming to be appreciated as to their ultimate utilization and value as a source for cellulose. Recent developments in the making of white paper from Southern pines indicate that the South can supply the paper needs of the United States. This section. now the country's largest producer of kraft paper, is destined to become the paper manufacturing center of the country. It will mark the next great industrial movement in the South similar to its development of textile manufacturing, furniture making, shoes, iron and steel and aluminum plate.

Within this area is one of the great agricultural regions of the country. As 60 per cent of all manufacturing is dependent upon agriculture for its raw materials, the Southeast has the capacity to supply food processing plants of every description as well as other plants utilizing the products of the farms and forests.

The sixteen Southern States annually spend approximately \$1,000,000,000 for food and feed produced elsewhere. It can supply practically all of this and the development of food manufacturing enterprises is one of the opportunities in this section for investment.

Leading chemical engineers of the country predict that the South will become the center of chemical manufacturing. Other authorities see this section advancing industrially to even greater extent than the accomplishments of the past twenty years when it surpassed the expectations of those who saw it become the dominant cotton manufacturing region of the United States. In fact, the country is looking to the South for its next forward movement. The Southeast will play its part in this march of progress because it has the raw materials, power and transportation facilities for tremendous industrial expansion.

In this period of world recovery, the Southeast and the entire South have their greatest opportunity.

The South Resurgent

(Continued from page 22)

of Virginia, North Carolina and Kentucky, the oil refineries in the Southwest, or the textile mills that span the cotton belt. Industrialization is everywhere apparent.

The other factor is the diversification practiced in the new agricultural South.

Cotton, the ancient heritage, remains paramount, and with tobacco accounts for the vast bulk of farming income. But the expansion of many other crops in recent years would seem to be a development of prime importance. This has been specially apparent to one associated as I am with the canning industry.

While Southern growers have utilized modern refrigeration and improved transportation and distribution facilities to find an enlarged market in the North for out-of-season and pre-season fresh vegetables, they have also taken advantage of the special soil and crop condition which make many parts of the South ideal for the growth of canning crops. For instance, in 1929, the last year for which complete United States census figures are available, in 15 Southern States vegetables, fruit and sea foods were canned to a value in excess of \$75,-000,000, as compared with production just above \$56,000,000 ten years previous. These products included beans, carrots, corn, greens, kraut, peas, pimientos, spinach, succotash, sweet potatoes, pickles, tomatoes, apples, blackberries, grapefruit, peaches and pears, clams, oysters, shrimp, shad and turtle.

The industrial aspect of this particular agricultural fact is that all of this produce was canned within a few miles of where it was grown. The most recent reports of the Bureau of the Census revealed 902 canneries in 15 Southern States in 1929, as compared with 695 two years earlier. My own company now has can manufacturing plants at Baltimore, Hurlock, Md., Roanoke, Va., Bedford, Va., Wheeling, Memphis, Jacksonville, New Orleans, Harvey, La., where the plant was recently rebuilt and greatly enlarged and Houston where a new plant has just been completed.

The canning industry thus illustrates both of the factors mentioned, the diversification of crops, and the growth and diversification of industry. To me they seem indicative of the new South that is building a sounder economy which must ultimately reflect itself in every field of enterprise.

Telling About Tupelo

TUPELO CHAMBEG OF COMMERCE
Tupelo, Miss.

EDITOR MANUFACTURERS RECORD:

We are in receipt of the copies of the May issue of the Manufacturers Record in which our advertisement appeared and we are very much pleased with the set-up that you gave us, as well as the position. We wish to congratulate you upon this issue, as we have found it very interesting and feel quite sure that we have made no mistake in selecting your publication as a medium in which to tell the story of Tupelo.

F. A. HENDERSON, Secretary.

WESTERN POWER WHEELERS CAN HANDLE THE WHOLE JOB

Exceptional speed in loading and dumping, ability to handle almost any material except rock, and adaptability to either long or short haul work make the Western Power Wheeler one of the best units a grading contractor can

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A train of four of the 2-yard units carries from 8 to 10 cu. yds. of material each trip. It loads itself, transports the load and spreads it. No other loading or hauling equipment is needed.

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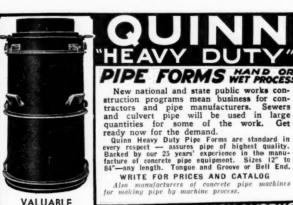
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JUNE NINETEEN THIRTY-FOUR

Steel Under Its Code

(Continued from page 24)

of the disadvantage under which this would place small companies. Years ago. the Government, in stamping out forever the practices of rebates on large shipments of railroad freight, established the principle that large users should not be granted special concessions and advantages which were denied small dealers.

During recent years, much steel was sold on the basis of cut prices and other concessions granted favored buyers. This not only was destructive to normal profits in the steel industry but it injected a state of confusion throughout the trade and among consumers.

The Steel Code has brought this whole price situation out into the open light of day. Members of the Code are compelled to file their lowest prices with the Secretary of the American Iron and Steel Institute. This does not mean that any attempt is made to fix prices; it is only a method of making prices public.

There is no restriction upon the prices each member may post for its products. Furthermore, under the Code, any producer may, if he so chooses, quote a buyer in any city in the country a price equal to the lowest price quotable for that city by any other member of the

Prices do not become effective until ten days after they are filed. This auto-, matically eliminates any chance for under-cover price cutting. This provision is the most important single guarantee of fair competition in the Code and because of this it should contribute greatly to the improvement of markets, of wages and of employment in the Industry.

Quality And Service

An important result of the new condition is that price discrimination is no longer a factor in sales campaigns. Other features are assuming their proper place in selling activities. Sellers of steel now emphasize the quality of their products, delivery speed and convenience, and other services which may legitimately be performed for the customer.

In posting prices, the Industry is simply doing business in public. It has adopted the procedure which has long been established practice in the retail merchandise field.

Every retailer posts prices on his products. No individual would think of entering a store with the prospect of haggling with the merchant over the price of something he wanted to buy. He knows the price at once and then decides, on that and other considerations, whether to buy or not. Posting of

prices still leaves plenty of room for ington and stood shoulder to shoulder in competition, but instead of the competition being conducted almost entirely on the basis of unknown and varying prices. it now depends upon more legitimate

Price Basing Points

A favorite target for political attack, and one about which The Federal Trade Commission and the Darrow Review Board have spilled much vitriolic ink, is that of basing points.

Any fair-minded person who would examine the facts as they exist would shortly be convinced that the basing point system is far from being the iniquitous thing that it is painted by its enemies. Actually, demolition of that system with one blow would result in a tragic dislocation of industry in America. The Steel industry would not assume that responsibility even if it disliked the basing point system. Also, far from encouraging monopoly and enabling the large steel companies to oppress small ones, the basing point system actually fosters competition. It enables any producer of steel to compete for business in any part of the country.

Employe Relations

Although the Steel Industry has not always received all the credit that was its due in connection with its labor relations, the fact remains that it has pursued an extremely enlightened course in this connection. Share-the-work was practiced in the Steel Industry for many months previous to the adoption of the National Industrial Recovery Act. The advanced ideas of the Industry with respect to industrial relations are best exemplified in the many successful employe representation plans now in existence. Some of these plans have been in operation for many years and many thousands of workers have utilized facilities and benefits available under this method of collective bargaining.

Recently, a survey was made by the American Iron and Steel Institute of the activities of the employe representation plans. Reports were received from large and small plants employing nearly 70 per cent of all those then employed in the Industry. In all the thousands of cases that were brought before the collective bargaining committees, employes' requests were granted in 70 per cent of them.

The Industry has indicated its firm determination to protect these plans, which are supported by a large majority of the employes. An evidence of this fighting spirit in the Industry on this point was seen early in April when employes and executives in the Industry from many companies came to Wash-

making a forceful attack upon the Wag. ner Bill before the Senate Committee on Education and Labor. This Bill, it was contended, would promote industrial strife. Its provisions were based entire. ly upon the false and unAmerican theory that relations between employers and employes must, of necessity, be hostile.

Recently, the Amalgamated Association of Iron, Steel and Tin Workers of North America presented demands for recognition from certain steel companies,

The attitude of the companies as expressed by them in various statements is that recognition in the sense demanded by the union simply means yielding to the closed shop principle. This the companies decline to do.

At the same time, the doors of the various companies are always open to em. ployes for the purpose of collective bargaining, but there is no indication that any agreement will be made with an outside union.

Duty To Stockholders

While the Industry is deeply concerned with all that can benefit its employes, it has not entirely forgotten its stockholders.

The Iron and Steel Industry in the country is owned by some 500,000 stockholders. The leaders of the Industry feel a grave responsibility to these stockholders and while dividends have practically ceased in recent years, it is recognized that stockholders are entitled to a fair return.

The experience in rational self-government under the Steel Code has given the leaders of the Industry a fuller understanding and appreciation of their social responsibility which they fully recognize and willingly accept. The Industry knows that it must have a fair and liberal labor policy. It knows that it must have prices that are fair to consumers and the public, and it has no intention or desire to have a price level which would yield an unreasonable prof-

The Industry believes that by elimination of the unfair competitive practices that prevailed over a period of years, labor will benefit: customers will be treated equitably and fairly; and the stockholders will receive a fair return.

Any return to the destructive competitive practices of the past, would result in making it utterly impossible for the Industry to support the huge financial burden imposed as a result of the labor provisions of the Code. This might be fatal to the whole recovery effort, in the success of which management and employes in the Industry along with other citizens are vitally concerned.

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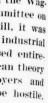
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An Improved Technique In Applying Filler



A new method of applying and removing excess asphalt filler in the construction of brick pavements has been increasingly employed with excellent results during the last two years.

A dilute "separating" mixture is sprayed on the brick which prevents adhesion of the asphalt to the top of the brick where it is not needed but allows a perfect asphalt bond between the sides of each brick. The excess asphalt is cut cleanly from the top of the pavement and is then re-used. Note the cleanness of the surface of this finished job and the excellent non-skid value thus obtained.

This new technique contributes to the ease of construction, as well as to developing the best traffic qualities of the pavement.

Detailed specifications for this method are available from National Paving Brick Association, National Press Building, Washington, D. C.

BRICK PAVEMENTS

PUT MORE MEN TO WORK SAVE TAXPAYERS MONEY

WHAT PRICE AGRICULTURAL ADJUSTMENT?

Stanley F. Morse*

THE signing of the Bankhead Cotton Control bill marks the second phase of the progress of the "independent" American farmer towards the shackles of collective farming. Like the sugar coating of a bitter pill the billion dollars of "benefits (?)" paid our farmers for voluntary (?) crop and hog reduction now taste sweet in their mouths. But the second recalculated cotton acreage reduction edict has showed many farmers what to expect from inexperienced, theoretical economists.

Their AAA plan purposes to help the average farmer secure profitable prices for his products. Such prices must be based on production costs that range from medium to high. Or to put it another way, the proposed prices would place a premium on inefficient farming instead of being based on low-cost, efficient farming. As a result, farmers are led to believe that they can secure above-the-market prices on products offered for sale in highly competitive world markets, especially cotton and wheat, when even an economist should know that if the reduction of Americanproduced staples causes higher prices, other countries will find it profitable to raise more of these products to the gradual exclusion of ours. A recent Associated Press dispatch stated that Poland is buying only Soviet cotton.

While one government agency has been working to secure reduced production the so-called "Seed Loan" for several years has greatly stimulated crop production especially among submarginal, high-cost farmers. Another government agency was paying excessively high CWA or relief wages to workers on projects in rural districts. Much of the most valuable constructive work being done by Federal and State agricultural specialists in promoting lower production costs, better quality farm products and more efficient mar-

keting has been largely abandoned or curtailed by burdening agricultural officials with the destructive "agricultural adjustment" program.

Some temporary benefit in increased prices (particularly in cotton) may have been secured, but after all 12 cent cotton is worth only about 7 cents in terms of the 100-cent gold dollar of a year ago, while the prices of fertilizers, seeds, labor and other farm supplies have increased 25 to 50 per cent due largely to the NRA and inflation. Moreover, many basic products like hogs, milk, eggs, and vegetables show little or no improvement in price, and in the case of hogs the processing tax is in effect being paid by the farmers themselves.

Not only are farmers being deceived by roseate pictures of profitable prices and a comfortable living for all but the State Agricultural College staffs from the president down seem to have been bulldozed into silence or innocuous platitudes. It is quite evident that college, experiment station and extension officials, afraid of losing their jobs or appropriations, are echoing the AAA policies even though their tongues may be in their cheeks. Those who have often helped to safeguard the farmers' interests are hamstrung.

The sooner our farmers realize there is no short cut to prosperity, that they have been lured into a costly experiment that will curtail their liberties and flatten their pocketbooks, the sooner they can resume progress based on the principle, "self-help is best." Planning is needed, but this must be practical planning done mainly by the farmers themselves. And the plans thus made must be carried out on a cooperative basis with the full knowledge that there is no substitute for common sense, hard work and thrift.

WBAL Gets Own Wave on Full-Time Schedule

Baltimore, of which Frederick R. Huber is Director, is Maryland's only high power and clear channel station. Permission for this broadcaster to remain on its own wave every day in the week until 9 P. M. was recently granted by the Federal Radio Commission. This new arrangement permits WBAL to send out its programs on 1060 Kilocycles from 7 A. M. to 9 P. M., instead of having to change its wave length to 760 Kilocycles

(WJZ's wave) at 4 P. M. as formerly.
Listeners all along the Atlantic Seaboard in WBAL's area, are finding this new plan a happy arrangement as practically all the favorite programs may now be received without the necessity

of interruption occasioned by changing

Station WBAL has been on the air since November 1925. It is a 10,000 watt station and just recently relocated and reconstructed its transmitting station, bringing it 12 miles closer to the city and installing the newest type Vertical Antenna System the chief feature of which is a High Capacity Crown which is one of WBAL's own engineering ideas and developments.

To See Tennessee Valley Development

It has been arranged for those attending the meeting of the Tennessee State Press Association, which takes place in Knoxville, June 7-9, to have the opportunity to visit both the TVA development and that of private industry.

On Friday, June 8, members of the Association will be shown Norris Dam, where they will have lunch and inspect the TVA project. The following day, June 9, the publishers will be guests of the Aluminum Company of America at Alcoa, Tenn., and at the power sites in the Smoky Mountains.

In addition to the aluminum reduction plant and various fabricating plants located at Alcoa, the power developments of the company on the Little Tennessee River will be visited. An attractive booklet will be distributed by the Aluminum Company. It points out the expenditures of this company in Tennessee, which annually for the past five years have been over four and a quarter million dollars for payrolls, freight and express bills and supplies purchased from Tennessee farms. During the same period the company states the annual average of aluminum sales in Tennessee were not more than \$250,000.

It is shown that through the company's development, the increased taxable wealth of Blount County, Tennessee, has brought that county from 85th position in 1913 up to the position of 8th at the present time. The company states that the assessed valuation of its property in Tennessee is greater than the total assessed valuation in 46 of the 8tate's 95 counties.

REX Modern Drum Paver.—Bulletin 244, issued by Chain Belt Company, Milwaukee, Wis., illustrates and describes the new REX Modern Drum Paver for 1934 and presents some outstanding features of this machine, including its modern high carbon steel drum with replaceable alloy steel liners on each of its buckets and blades, and in its charging head.

^{*}As a consulting agricultural engineer of 27 years experience, Mr. Morse is familiar with agricultural matters in this country and many foreign countries. For the past two-and-a-half years he has been planning and directing an agricultural program for Sumter County, S.C., and as a practical farmer on his own account is in close touch with the farming situation.

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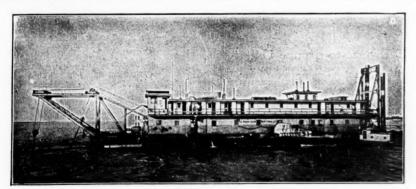
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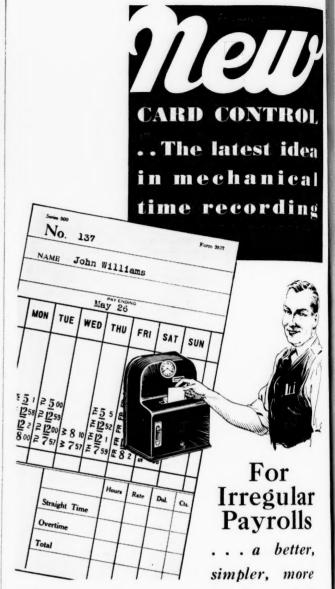
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Suppose, for example, an employee registers for the fifth time during the day. This recorder will automatically place that record in the FIFTH position. If another em-ployee, immediately following, is making his first registraion for the day, his record will automatically be placed in the FIRST position. This without any setting, because the card controls the record.

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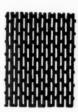
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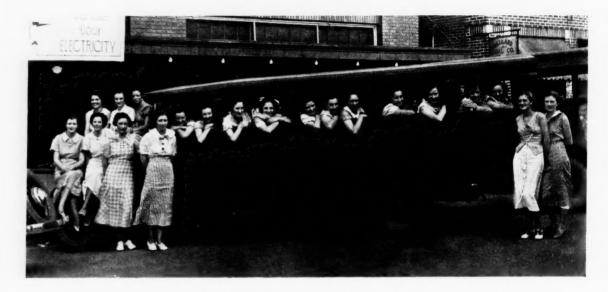
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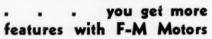
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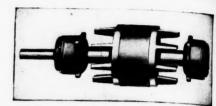
Today the pioneering still goes on — pioneering to create the standards of the industry of tomorrow. But F-M pioneering is an exacting pioneering! It is a developed method of building motors better mechanically — building them better to serve you longer at lower maintenance expense.

These motors meet the most ex-

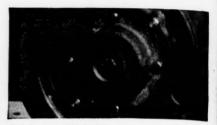
acting electrical specifications. But with characteristic thoroughness Fairbanks-Morse has achieved a position of leadership in mechanical construction.

Fairbanks-Morse pioneered mechanical excellence in electric motors. It pioneered ball bearings, grease tube lubrication, one-piece rotor construction.

Pioneers in motor building progress, Fairbanks-Morse asks only an investigation of how much more these motors have to offer. Start your investigation by writing for full information. Address Fairbanks, Morse & Co., 900 S. Wabash Avenue, Chicago, Ill.



Complete rotor assembly with cartridge-type sealed ball bearings. Note rotor winding is of one-piece construction.



Lubricate sealed ball bearings once a year with tube contained lubricant. Bearings, dust tight. No lubrication drip.



Group wound coils—an entire phase group in a single piece of wire—lead connections from each group WELDED, not soldered or brazed.



Sealed-in leads through frame opening—anchored permanently. No chance for strain on field leads.



Slot insulation — self locking by means of cuff construction — permanent and additional protection for field windings.



Final vibrometer test
—one of a series to
insure a smooth running motor with minimum vibration.



FAIRBANKS-MORSE MOTORS

POWER, PUMPING AND WEIGHING EQUIPMENT 104 Years

6094-EA 40.62